BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 14.12.94 Test oil : ISO 4113 Combination No. : 0402648933 Injection pump Pump designation : PE8P120A320LS7847-3 EP type number : 0412628886 Governor Governer design. : RQ300/950PA1031-14 Governer no. : 0421801720 Cust. part No. : 0230742702 Customer-spec. information Customer : MB-NFZ Motor : 0M402 LA Power KW : 280.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413025 Inlet press. bar : Tolerance bar 0.1 Tolerance L/h : **←** 10.0 Test nozzle holde assembly : 1688901105 Opening pressure 208.5 Tolerance bar : + 1.5

: 1409918004

```
Test lines
                : 1680750075
 Outside diameter :
                       8.0
 x inside diameter:
                        3.0
 x length mm : 1000
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : +-
Prestroke mm
                      5.55
Tolerance mm
test only
                 : + 0.10
Rack travel in mm : 20.50
              : +- 0.50
Tolerance mm
                : 8-7-2-6-3
:-5-4-1
Firing order
Phasing
                : 0-45-90-135-180
                : -225-270-315
Tolerance
                : + 0.30
Check
                : +- 0.75
tolerance °NW
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
```

Rated speed rpm :

550

Lube oil

| | | _ + guide sleeve |
|--|--|---|
| Rack travel in m Tolerance mm | | travel mm : 6.13 Tolerance mm : +- 0.10 |
| Del. quantity cm3/1000 strokes | ====================================== | _ + Rated speed rpm : 443 + guide sleeve + travel mm : 4.35 |
| Tolerance | | Tolerance mm : +- 0.10 |
| cm3/1000 strokes | s : +- 1.0 | Rated speed rpm : 550 guide sleeve |
| Check tolerance cm3/1000S. | : ← 4.0 | † travel mm : 6.00 † Tolerance mm : + 0.10 |
| Spreed Tolerance | | Rated speed rpm : 1160 guide sleeve |
| cm3/1000 strokes Check tolerance | : | travel mm : 11.50 Tolerance mm : +- 0.50 |
| cm3/1000s. | : 9.0 | Rated speed rpm : 835 guide sleeve |
| 2nd speed rpm | | travel mm : 6.38 Tolerance mm : +- 0.10 |
| Rack travel in m Tolerance mm | | + |
| Del. quantity cm3/1000 strokes Tolerance | : 13.0 | GUIDE SLEEVE POSITION |
| cm3/1000 strokes Check tolerance | : ← 3.0 | + Rated speed rpm : 600 + Rack travel in mm : 20.00 |
| cm3/1000s. Spreed | : +- 6.0 | Tolerance mm : +- 0.80 |
| Tolerance cm3/1000 strokes Check tolerance | : 6.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000s. | : 10.0 | Rated speed rpm : 550 Aneroid pressure |
| (B) SETTING OF IN | NJECTION PUMP | + hPa : 1200 + Del. quantity |
| WITH GOVERNOR | | - cm3/1000 strokes : 239.0 - Tolerance |
| GUIDE SLEEVE TRAN | VEL | cm3/1000 strokes : +- 1.0 Check tolerance |
| Rated speed rpm guide sleeve | : 300 | + cm3/1000s. : +- 4.0 + Spreed + Tolerance |
| travel mm Tolerance mm | : 1.62 : +- 0.10 | - cm3/1000 strokes : 6.0 - Check tolerance |
| Rated speed rpm | | cm3/1000s. : 9.0 |
| guide sleeve travel mm Tolerance mm | : 6.84 : + 0.10 | RATED SPEED |
| Rated speed rpm | : 950 | control lever |
| guide sleeve travel mm Tolerance mm | : 6.50 : +- 0.10 | + position degree : 97.0 + tolerance degree : + 4.0 |
| Rated speed rpm | | rack travel mm : 13.00 Rated speed rpm : 998 |
| | | |

| Tolerance 1/min | : + 8 | + | SETTING |
|--|-------------------------------|-------------|---|
| rack travel mm Rated speed rpm Tolerance 1/min | : 1085 : +- 15 | † † | Rated speed rpm : 400 Pressure hPa : 1200 rack travel mm : 14.80 Tolerance mm : +- 0.05 |
| rack travel mm Tolerance mm Rated speed rpm | : 0.75 : +- 0.75 : 1350 | † | MEASUREMENT Pressure hPa : - |
| LOW IDLE | | + | Rated speed rpm : 400 rack travel mm : 10.60 Tolerance mm : +- 0.20 |
| control lever position degree | : 70.0 | Ŧ | Rated speed rpm : 400 |
| tolerance degree Testing: | : +- 4.0 | 1 | Pressure hPa : 300 rack travel mm : 11.90 Tolerance mm : +- 0.15 |
| Rated speed rpm rack travel mm Tolerance mm | | <u> </u> | Pressure hPa : 450 rack travel mm : 12.90 Tolerance mm : +- 0.10 |
| rack travel mm Rated speed rpm Tolerance 1/min | : 2.00 : 350 : ← 20 | ‡ | START CUT-OUT |
| Rated speed rpm | : 200 | ‡ | Rated speed rpm : > 100 Check |
| CRT mm min. | : > 5.50 | Ŧ | speed 1/min : > 80 Rated speed rpm : < 220 Check |
| TORQUE CONTROL | | + | speed 1/min : < 240 |
| Rated speed rpm rack travel mm Tolerance mm | : 550 : 14.80 : ← 0.05 | † + + | FUEL DELIVERY CHARACTERISTICS Aneroid pressure |
| Rated speed rpm rack travel mm Tolerance mm | : 14.00 | † + + | hPa : 1200 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 214.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 14.10 | † † | Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 5.0 |
| Rated speed rpm rack travel mm Tolerance mm | | † † | Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance |
| Rated speed rpm rack travel mm Tolerance mm | : 14.75 | ‡ | cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 400 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | + | Del. quantity cm3/1000 strokes : 107.0 Tolerance |
| | | Į | cm3/1000 strokes : +- 1.0 |

Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance

Check tolerance cm3/1000s. : 12.0

BREAKAWAY

Rack travel in mm : 13.00
Rated speed rpm : 998
Tolerance 1/min : +- 8

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 210.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 300 5.70 rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.06.94 Test oil : ISO 4113

Combination No. : 0402648938

Injection pump

Pump designation : PE8P120A320LS7840

: -10

EP type number : 0412628856

Governor

Governer design. : RQ300/1050PA1030-15

Governer no. : 0421801736

Cust. part No. : 0230743602

Customer-spec. information Customer : MB-NFZ Motor : 0M442 A

Power KW : 250.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar Tolerance bar

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Lube oil : 1409918004

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 5.25 Tolerance mm

test only : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.30Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 700

Rack travel in mm : 13.45 Tolerance mm : +- 0.05

Test lines : 1680750075

| Del. quantity cm3/1000 strokes | : 212.0 | f guide sleeve travel mm : 4.46 Tolerance mm : +- 0.10 |
|--|---------------------|---|
| Tolerance cm3/1000 strokes | : +- 1.0 | Rated speed rpm : 510 |
| Check tolerance cm3/1000s. | : + 4.0 | travel mm : 6.00 Tolerance mm : + 0.10 |
| Spreed Tolerance cm3/1000 strokes | : 6.0 | Rated speed rpm : 1270 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 |
| Check tolerance cm3/1000s. | : 9.0 | Rated speed rpm : 873 |
| 2nd speed rpm | : 300 | + guide sleeve + travel mm : 6.26 |
| Rack travel in mm Tolerance mm | 6.50 : +- 0.30 | Tolerance mm : + 0.10 |
| Del. quantity cm3/1000 strokes Tolerance | : 13.0 | GUIDE SLEEVE POSITION |
| cm3/1000 strokes Check tolerance | : ← 3.0 | + Rated speed rpm : 600 + Rack travel in mm : 20.00 |
| cm3/1000s. Spreed Tolerance | : +- 6.0 | Tolerance mm : +- 0.80 |
| cm3/1000 strokes Check tolerance | : 8.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000s. | : 12.0 | Rated speed rpm : 700 Aneroid pressure |
| (B) SETTING OF IN | JECTION PUMP | + hPa : 750 + Del. quantity - cm3/1000 strokes : 212.0 - Tolerance |
| GUIDE SLEEVE TRAVI | EL | cm3/1000 strokes : +- 1.0 Check tolerance |
| Rated speed rpm guide sleeve | : 300 | + cm3/1000S. : + 4.0 + Spreed + Tolerance |
| travel mm Tolerance mm | : 1.82 : + 0.10 | + cm3/1000 strokes : 6.0 + Check tolerance |
| Rated speed rpm guide sleeve | : 1103 | + cm3/1000s. : 9.0 |
| travel mm Tolerance mm | : 6.71 : + 0.10 | RATED SPEED |
| Rated speed rpm guide sleeve | : 1050 | control lever 102.0 |
| travel mm Tolerance mm | : 6.35 : +- 0.10 | tolerance degree : + 4.0 |
| Rated speed rpm guide sleeve | : 811 | <pre>+ rack travel mm : 11.80 + Rated speed rpm : 1098 + Tolerance 1/min : +- 8</pre> |
| travel mm Tolerance mm | : 6.09 : + 0.10 | + rack travel mm : 4.00 |
| Rated speed rpm | : 411 | + Rated speed rpm : 1185 + Tolerance 1/min : +- 15 |

| rack travel mm Tolerance mm Rated speed rpm | : +- 0.50 | + + + + | Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : 400 : 11.15 : + 0.15 |
|---|------------------------------|---|--|--|
| LOW IDLE | | | Rated speed rpm | : 400 |
| control lever position degree tolerance degree Testing: | : 77.0 : +- 4.0 | + | Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm | : 11.60 : +- 0.10 : 400 : 12.40 |
| Rated speed rpm rack travel mm Tolerance mm | : 300 : 6.50 : + 0.10 | Ŧ | START CUT-OUT | |
| rack travel mm Rated speed rpm Tolerance 1/min | : 2.00 : 400 : ← 20 | | Rated speed rpm Check speed 1/min Rated speed rpm Check | : > 80 : < 220 |
| Rated speed rpm | | Ŧ | speed 1/min | : < 240 |
| CRT mm min. | : > 8.80 | ‡ | FUEL DELIVERY CHA | RACTERISTICS |
| TORQUE CONTROL | | | Aneroid pressure | : 750 |
| Rated speed rpm rack travel mm Tolerance mm | : 13.45 | - | Rated speed rpm Del. quantity cm3/1000 strokes | : 1050 |
| Rated speed rpm rack travel mm Tolerance mm | : 1050 : 12.80 | +++++++++++++++++++++++++++++++++++++++ | Tolerance cm3/1000 strokes Check tolerance | |
| Rated speed rpm | | † † | cm3/1000s. Spreed Tolerance | |
| rack travel mm Tolerance mm | : +- 0.05 | ‡ | Check tolerance | : 8.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 800 : 13.45 : + 0.05 | Ī | cm3/1000S. Aneroid pressure hPa | : 12.0 |
| - | | ‡ | Rated speed rpm Del. quantity | 500 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | ‡ | cm3/1000 strokes Tolerance | : 137.0 |
| | | ‡ | cm3/1000 strokes Check tolerance | : ← 1.0 |
| SETTING | | + | cm3/1000s. Spreed | : + 4.0 |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 400 : 750 : 13.45 | ‡ | Tolerance cm3/1000 strokes Check tolerance | : 8.0 |
| | : ← 0.05 | ‡ | cm3/1000s. | : 12.0 |
| MEASUREMENT | | ‡ | BREAKAWAY | |

Rack travel in mm : 11.80
Rated speed rpm : 1098
Tolerance 1/min : + 8

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 200.0 Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : \leftarrow 14.0

LOW IDLE

Rated speed rpm 300 6.50 rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes 13.0 Tolerance cm3/1000 strokes 3.0 : +-Check tolerance cm3/1000s. 6.0 : +--Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 01.08.94 Test oil : ISO 4113 Combination No. : 0402648945B Injection pump Pump designation: PE8P120A320LS7847-3 EP type number : 0412628886 Governor Governer design. : RQ300/1050PA1030-10 Governer no. : 0421801718 Cust. part No. : 0230747802 Customer-spec. information : MB-NFZ Customer Motor : 0M402 LA Power KW : 280.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1417413025 Inlet press. bar Tolerance bar : +- 0.1 Tolerance L/h : + 10.0Test nozzle holde : 1688901105 assembly Opening pressure bar 208.5 Tolerance bar : +- 1.5

: 1409918004

Test lines : 1680750075 Outside diameter : 8.0 x inside diameter : x Length mm : 1000 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values ____ BEGINNING OF DELIVERY Test pressure bar : 31.0 Tolerance bar : +-Prestroke mm 5.55 : + - 0.05Tolerance mm test only : +- 0.10 Rack travel in mm: 20.50 : + 0.50 Tolerance mm : 8-7-2-6-3 :-5-4-1 firing order Phasing : 0-45-90-135-180 : -225-270-315 : + 0.30 Tolerance Check tolerance °NW : +- 0.75 BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : 8 BASIC SETTING Rated speed rpm 550

Lube oil

| Rack travel in m Tolerance mm | | + guide sleeve + travel mm : 6.08 + Tolerance mm : +- 0.10 |
|---|--|---|
| Del. quantity | | + Rated speed rpm : 414 |
| cm3/1000 strokes | 226.0 | travel mm : 3.88 |
| Tolerance cm3/1000 strokes | : ← 1.0 | + Tolerance mm : + 0.10 |
| Check tolerance | : +- 4.0 | Rated speed rpm : 550 guide sleeve travel mm : 6.00 |
| Spreed | | Tolerance mm : + 0.10 |
| Tolerance cm3/1000 strokes | : 6.0 | Rated speed rpm : 1270 guide sleeve travel mm : 11.50 |
| Check tolerance cm3/1000s. | : 9.0 | travel mm : 11.50 Tolerance mm : +- 0.50 |
| 2nd speed rpm | : 300 | Rated speed rpm : 847 guide sleeve |
| Rack travel in m Tolerance mm | m : 5.70 : ← 0.30 | travel mm : 6.23 Tolerance mm : +- 0.10 |
| Del. quantity | | |
| cm3/1000 strokes Tolerance | | GUIDE SLEEVE POSITION |
| cm3/1000 strokes Check tolerance | | Rated speed rpm : 600 |
| cm3/1000s. Spreed Tolerance | : +- 6.0 | Rack travel in mm : 20.00 Tolerance mm : + 0.80 |
| cm3/1000 strokes | : 6.0 | |
| Check tolerance cm3/1000s. | : 10.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| | , , , , , | Rated speed rpm : 550 Aneroid pressure |
| (B) SETTING OF IN WITH GOVERNOR | NJECTION PUMP | hPa : 1200 Del. quantity |
| | | + cm3/1000 strokes : 226.0 + Tolerance |
| GUIDE SLEEVE TRAV | | cm3/1000 strokes : +- 1.0 Check tolerance |
| Rated speed rpm guide sleeve | | cm3/1000s. : +- 4.0 Spreed |
| travel mm Tolerance mm | : 1.79 : + 0.10 | Tolerance cm3/1000 strokes : 6.0 |
| | - · · · - | |
| Rated speed rpm | _ | Check tolerance cm3/1000s. : 9.0 |
| Rated speed rpm guide sleeve travel mm Tolerance mm | _ | cm3/1000s. : 9.0 |
| guide steeve travel mm Tolerance mm Rated speed rpm | : 1104 : 6.65 | |
| guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve | : 1104 : 6.65 : +- 0.10 : 1050 | cm3/1000s. : 9.0 RATED SPEED control lever |
| guide steeve travel mm Tolerance mm Rated speed rpm | : 1104 : 6.65 : + 0.10 | |
| guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm | : 1104 : 6.65 : +- 0.10 : 1050 : 6.30 : +- 0.10 | cm3/1000s. : 9.0 RATED SPEED control lever position degree : 99.0 |

| Tolerance 1/min | - | + rack travel mm : 14.40 + Tolerance mm : +- 0.05 |
|--|--------------------------------|---|
| rack travel mm Rated speed rpm Tolerance 1/min | : 1190 | MEASUREMENT |
| rack travel mm Tolerance mm Rated speed rpm | : 0.70 : +- 0.70 | Pressure hPa : - Rated speed rpm : 400 rack travel mm : 10.60 Tolerance mm : + 0.15 |
| LOW IDLE | | Rated speed rpm : 400 |
| control lever position degree | : 72.0 | Pressure hPa : 450 rack travel mm : 12.90 Tolerance mm : +- 0.10 |
| tolerance degree Testing: | : +- 4.0 | + Pressure hPa : 300 + rack travel mm : 11.90 + Tolerance mm : + 0.15 |
| Rated speed rpm rack travel mm | | |
| Tolerance mm | : ← 0.10 | FUEL DELIVERY CHARACTERISTICS |
| rack travel mm Rated speed rpm Tolerance 1/min | : 405 | Aneroid pressure hPa : 1200 Rated speed rpm : 1050 |
| Rated speed rpm | : 200 | + Del. quantity + cm3/1000 strokes : 212.0 |
| CRT mm min. | : > 7.10 | Tolerance cm3/1000 strokes : +- 2.0 Check tolerance |
| TORQUE CONTROL | | - + cm3/1000s. : +- 5.0 - Spreed |
| Rated speed rpm rack travel mm Tolerance mm | : 14.40 | Tolerance - cm3/1000 strokes : 8.0 - Check tolerance |
| | | - cm3/1000s. : 12.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 1050 : 14.05 : +- 0.10 | Aneroid pressure hPa : - Rated speed rpm : 400 |
| Rated speed rpm rack travel mm | : 14.20 | + Del. quantity + cm3/1000 strokes : 107.0 + Tolerance |
| Tolerance mm | : +- 0.10 | + cm3/1000 strokes : +- 1.0 + Check tolerance |
| Rated speed rpm rack travel mm Tolerance mm | : 800 : 14.40 : ← 0.05 | + cm3/1000S. : +- 4.0 + Spreed |
| | . += 0.03 | Tolerance - cm3/1000 strokes : 8.0 - Check tolerance |
| ANEROID/ALTITUDE COMPENSATOR TEST | | - check toterance - cm3/1000s. : 12.0 |
| SETTING | | BREAKAWAY |
| Rated speed rpm Pressure hPa | | Rack travel in mm : 13.00 Rated speed rpm : 1098 |

Tolerance 1/min : + 8

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.60 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 60.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm 300 rack travel mm 5.70 : + 0.30Tolerance mm Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 : +-Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 17.11.94 Test oil : ISO 4113

Combination No. : 0402648979

Injection pump

Pump designation : PE8P12OA92O/4LS7358

EP type number : 0412628899

Governor

Governer design. : RQV350...1100PA795

: -21

Governer no. : 0421814079

Cust. part No. : 1367403

Customer-spec. information

Customer : SCANIA

Motor : DSI14 67/68M

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolérance °C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Tolerance l/h: \leftarrow 20.0

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-2-7-3-4 :-5-6-8

Phasing : 0-45-90-135-180

: -225-270-315Tolerance : +0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

| Rack travel in m Tolerance mm | | Tolerance mm : +- 0.50 |
|--|---------------------|---|
| - | | GUIDE SLEEVE POSITION |
| Del. quantity cm3/1000 strokes | : 283.0 | control lever |
| Tolerance cm3/1000 strokes | : + 1.0 | position degree : - 1 Rated speed rpm : 1270 |
| Check tolerance cm3/1000s. | : + 4.0 | Rack travel in mm : 14.00 Tolerance mm : +- 1.30 |
| Spreed Tolerance cm3/1000 strokes | : 8.0 | FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 |
| Check tolerance cm3/1000s. | : 12.0 | Aneroid pressure hPa : - |
| (B) SETTING OF IN | VJECTION PUMP | Del. quantity cm3/1000 strokes : 283.0 Tolerance |
| WITH GOVERNOR | ‡ | cm3/1000 strokes : +- 1.0 Check tolerance |
| GUIDE SLEEVE TRAN | /EL | cm3/1000s. : +- 4.0 Spreed |
| Rated speed rpm guide sleeve | : 350 | Tolerance cm3/1000 strokes : 8.0 Check tolerance |
| travel mm Tolerance mm | : 1.44 : +- 0.25 | cm3/1000s. : 12.0 |
| Rated speed rpm guide sleeve travel mm | : 1158 | RATED SPEED |
| travel mm Tolerance mm | : 7.87 : + 0.25 | control lever position degree : 48.0 |
| Rated speed rpm guide sleeve | + | tolerance degree : +- 4.0 |
| travel mm Tolerance mm | : 5.12 : + 0.25 | control lever position degree : 105.0 tolerance degree : +- 4.0 |
| Rated speed rpm guide sleeve | : 411 | rack travel mm : 13.90 |
| travel mm | : 2.06 | Rated speed rpm : 1145 |
| Tolerance mm | : +- 0.25 | Tolerance 1/min : +- 5 |
| Rated speed rpm guide sleeve | : 461 | rack travel mm : 4.00 Rated speed rpm : 1300 |
| travel mm Tolerance mm | : 2.64 : + 0.25 | Tolerance 1/min : +- 15 |
| Rated speed rpm | : 520 | rack travel mm : 0.50 Tolerance mm : +- 0.50 |
| guide sleeve travel mm | : 3.19 | Rated speed rpm : 1400 |
| Tolerance mm | : + 0.25 | |
| Rated speed rpm guide sleeve | : 1480 | FOM IDTE |
| travel mm | : 11.50 | |
| | | |

| control lever position degree tolerance degree | : 73.0 : + 4.0 |
|---|---|
| control lever position degree tolerance degree | : 15.0 : ← 4.0 |
| Testing: | |
| Rated speed rpm rack travel mm Tolerance mm | : 350 : 5.80 : + 0.30 |
| Rated speed rpm | : 250 |
| CRT mm min. | : > 8.90 |
| CONTINUOUS-ACTION | N CONTROL |
| Rated speed rpm | : 325 |
| TORQUE CONTROL | |
| Rated speed rpm rack travel mm Tolerance mm | : 1100 : 14.95 : + 0.05 |
| | |
| ANEROID/ALTITUDE COMPENSATOR TEST | |
| ANEROID/ALTITUDE | |
| ANEROID/ALTITUDE COMPENSATOR TEST | |
| ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm | : 500 : 1500 : 14.95 |
| ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 1500 : 14.95 |
| ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm | : 500 : 1500 : 14.95 : ← 0.05 : - : 500 : 10.20 : ← 0.20 |
| ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : 500 : 1500 : 14.95 : ← 0.05 : - : 500 : 10.20 : ← 0.20 |

| : - : 1100 : 255.0 : +- 4.0 : +- 6.0 |
|---|
| : - : 500 : 143.0 : ← 1.0 : +- 4.0 |
| – |
| : 13.90 : 1145 : +- 5 |
| IVERY |
| : 100 : 10.20 : + 0.20 : 150.0 : + 20.0 |
| |

FUEL DELIVERY CHARACTERISTICS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402648989

Injection pump

Pump designation : PE8P12OA72OLS7266-2

EP type number : 0412628901

Governor

Governer design. : RQ750PA758-15 Governer no. : D421801660

Cust. part No. : 1371441

Customer—spec. information Customer : SCANIA Motor : DS 14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600 REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-2-7-3-4

: ~ 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 16.15 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 315.0

| Tolerance cm3/1000 strokes Check tolerance | : +- 1.0 | - Check tolerance - cm3/1000S. : 12.0 |
|--|------------------------------|--|
| cm3/1000s. | : +- 4.0 | RATED SPEED |
| Spreed Tolerance cm3/1000 strokes | : 8.0 | control lever position degree : 32.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. | : 12.0 | control lever position degree : 94.0 |
| (B) SETTING OF IN WITH GOVERNOR | NJECTION PUMP | tolerance degree : +- 4.0 |
| GUIDE SLEEVE TRAN | 4 | ANEROID/ALTITUDE COMPENSATOR TEST |
| Rated speed rpm guide sleeve travel mm Tolerance mm | : 759 : 6.36 : + 0.25 | SETTING |
| Rated speed rpm guide sleeve travel mm Tolerance mm | 1 | Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 16.15 Tolerance mm : + 0.05 |
| Rated speed rpm guide sleeve travel mm Tolerance mm | : 16.58 : + 0.25 | MEASUREMENT Pressure hPa : - Rated speed rpm : 500 rack travel mm : 12.50 Tolerance mm : + 0.20 |
| Rated speed rpm guide sleeve travel mm Tolerance mm | : 798 : 10.00 : + 0.25 | Rated speed rpm : 500 Pressure hPa : 420 |
| Rated speed rpm guide sleeve | : 860 | rack travel mm : 13.30 Tolerance mm : + 0.20 |
| travel mm Tolerance mm | : 11.50 : + 0.50 | Pressure hPa : 680 rack travel mm : 15.05 Tolerance mm : + 0.05 |
| FULL LOAD DELIVER | Y AT FULL LOAD STOP | |
| Rated speed rpm Aneroid pressure hPa | : 700 | FUEL DELIVERY CHARACTERISTICS Aneroid pressure |
| Del. quantity cm3/1000 strokes Tolerance | + | hPa : - Rated speed rpm : 500 Del. quantity |
| cm3/1000 strokes Check tolerance cm3/1000S. | : + 1.0 : + 4.0 | cm3/1000 strokes : 221.0 Tolerance cm3/1000 strokes : +- 1.0 |
| Spreed Tolerance cm3/1000 strokes | : 8.0 | Check tolerance cm3/1000s. : +- 4.0 |

Aneroid pressure
hPa : Del. quantity
cm3/1000 strokes : 19.0
Tolerance
cm3/1000 strokes : + 4.0
Check tolerance
cm3/1000s. : + 6.0
Tolerance
cm3/1000 strokes : 5.0
Check tolerance
cm3/1000 strokes : 9.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.50 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.08.94 : ISO 4113

Combination No. : 0402746914

Injection pump

Pump designation : PES6P120A720LS7238

: -10

EP type number : 0412726873

Governor

Governer design. : RQ300/1100PA1008-4

Governer no. : 0421801745

Cust. part No. : 0200748002

Customer-spec. information

Customer : MB-NFZ

Motor

: 0M447 hLA

Power KW

: 220.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 1417413025

Inlet press. bar : 1.5

Tolerance l/h: +- 10.0

Test nozzle holde

assembly

: 1688901105

Opening pressure

bar

208.5

Tolerance bar

Test lines

: 1680750075

Outside diameter : 8.0

x inside diameter : 3 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

: 5.55 : +- 0.05 Prestroke mm Tolerance mm

test only : **←** 0.10

Rack travel in mm: 20.50 Tolerance mm : +- 0.50

Firing order : 6-2-4-1-5-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm 600

Rack travel in mm : 13.80 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes :

206.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

| Check tolerance cm3/1000s. : +- 4.0 | + control lever |
|---|--|
| Spreed Tolerance | + position degree : 98.0 + tolerance degree : + 4.0 |
| cm3/1000 strokes : 5.0 | rack travel mm : 13.30 |
| Check tolerance cm3/1000s. : 9.0 | Rated speed rpm : 1153 Tolerance 1/min : +- 8 |
| 2nd speed rpm : 300 | + rack travel mm : 4.00 + Rated speed rpm : 1235 + Tolerance 1/min : +- 15 |
| Rack travel in mm : 6.30 | Tolerance 1/min : +- 15 |
| Tolerance mm : + 0.30 | rack travel mm : 0.75 |
| Del. quantity | Tolerance mm : + 0.75 |
| cm3/1000 strokes : 19.0 Tolerance | Rated speed rpm : 1300 |
| cm3/1000 strokes : + 3.0 | |
| Check tolerance cm3/1000s. : +- 6.0 | LOW IDLE |
| Spreed | <u> </u> |
| Tolerance | control lever |
| cm3/1000 strokes : 8.0 | position degree : 73.0 |
| Check tolerance : 12.0 | tolerance degree : +- 4.0 |
| . 12.0 | Testing: |
| (D) SETTING OF INJECTION DIMP | 9-1-1 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | + Rated speed rpm : 300 + rack travel mm : 6.30 |
| WITH GOAFIMON | Tolerance mm : +- 0.10 |
| | - Joseph Mills Committee C |
| CUIDE CLEENE DOCUTION | rack travel mm : 2.00 |
| GUIDE SLEEVE POSITION - | Rated speed rpm : 400 Tolerance 1/min : +- 20 |
| Rated speed rpm : 650 | Tolerance 1/min : +- 20 |
| Book trough in man 20 00 | Rated speed rpm : 200 |
| Rack travel in mm : 20.00 - Tolerance mm : + 0.80 - | CRT mm min. :> 8.20 |
| 1000141100 11111 | CRT mm min. :> 8.20 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | TORQUE CONTROL |
| TOLL LOND DELIVERY AT TOLL LOAD STOP | F TORQUE CONTROL |
| Rated speed rpm : 600 - | Rated speed rpm : 600 |
| Aneroid pressure | rack travel mm : 13.80 |
| hPa : 600 - Del. quantity - | Tolerance mm : +- 0.10 |
| cm3/1000 strokes : 206.0 | Rated speed rpm : 1100 |
| Tolerance | rack travel mm : 14.50 |
| cm3/1000 strokes : + 1.0 | - Tolerance mm : +- 0.10 |
| Check tolerance | |
| cm3/1000s. : +- 4.0 | AND DATA / AL TITLIA |
| Tolerance | - ANEROID/ALTITUDE - COMPENSATOR TEST |
| cm3/1000 strokes : 5.0 | " CONTENOMICK (ES) |
| Check tolorance | _ |
| cm3/Tüüüs. : 9.0 | - |
| | - MEASUREMENT |
| RATED SPEED | - Pressure hPa . 450 |
| 1 | - Pressure hPa : 150 - rack travel mm : -2.10 |
| · · · · · · · · · · · · · · · · · · · | L. IU |

| Tolerance mm | : ← 0.05 |
|-------------------------|----------------------|
| | |
| Pressure hPa | : 350 |
| rack travel mm | : -0.60 : +- 0.10 |
| Tolerance mm | : +- 0.10 |
| Pressure hPa | : 800 |
| rack travel mm | : 0.20 |
| Tolerance mm | : +- 0.05 |
| | |
| | |
| START CUT-OUT | |
| Rated speed rpm | : > 100 |
| Check | |
| speed 1/min | : > 80 : < 220 |
| Rated speed rpm | : < 220 |
| Check | . 2/0 |
| speed 1/min | : < 240 |
| | |
| FUEL DELIVERY CHA | ARACTERISTICS |
| Aneroid pressure | |
| hPa | : 1400 |
| Rated speed rpm | 1100 |
| Del. quantity | |
| cm3/1000 strokes | : 222.5 |
| Tolerance | |
| cm3/1000 strokes | : ← 1.5 |
| Check tolerance | |
| cm3/1000S. Spreed | : +- 4.5 |
| Tolerance | |
| cm3/1000 strokes | : 8.0 |
| Check tolerance | . 0.0 |
| cm3/1000s. | : 12.0 |
| Agamaid massages | |
| Aneroid pressure hPa | |
| Rated speed rpm | 500 |
| Del. quantity | . 300 |
| cm3/1000 strokes | : 141.0 |
| Tolerance | |
| cm3/1000 strokes | : + 1.0 |
| Check tolerance | |
| cm3/1000S. Spreed | : ← 4.0 |
| Tolerance | |
| cm3/1000 strokes | : 8.0 |
| Check tolerance | |
| cm3/1000S. | : 12.0 |
| | |
| BREAKAWAY | |
| | |
| Rack travel in mm | : 13.30 |
| Rated speed rpm | |
| Tolerance 1/min | |
| | • |

STARTING FUEL DELIVERY

| Rated speed rpm Del. quantity | : | 100 |
|-------------------------------------|-----|----------|
| cm3/1000 strokes Tolerance | : | 230.0 |
| cm3/1000 strokes Check tolerance | : + | 15.0 |
| cm3/1000s. | : + | 19.0 |

LOW IDLE

| : | + | 300 6.30 0.30 |
|---|---|---------------------|
| : | | 19.0 |
| : | +- | 3.0 |
| : | +- | 6.0 |
| : | | 8.0 |
| : | | 12.0 |
| | ::::::::::::::::::::::::::::::::::::::: | : +- : +- : : : : |

BOSCH INJ. PUMP TEST SPECIFICATIONS x inside diameter: 3.0 x length mm : Note remarks Refer to Service Info for test and adjustment instructions. REMARKS See microcard(s) W400/... Edition : 14,12,94 : ISO 4113 Test oil (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. Combination No. : 0403244034 per values ___ Injection pump Pump designation : PES4MW100/720RS1519 BEGINNING OF DELIVERY : -3 EP type number : 0413204018 Test pressure bar : Tolerance bar : +-Governor Governer design. : RQV300...1300MW132 : -3 Prestroke mm 4.55 Governer no. : 0420083296 Tolerance mm : +- 0.05 test only : + - 0.10Cust. part No. : 0240740702 Rack travel in mm : 21.00 Firing order : 1-3-4-2 Customer-spec. information Customer : MB-NF7 Motor : 0M364LA Power KW 77.0 : 0-90-180-270 Phasing Tolerance : +- 0.50 Check TEST BENCH REQUIREMENTS tolerance °NW : **←** 0.75 Test oil inlet temp. °C BASIC SETTING Tolerance °C Rated speed rpm 1300 Overflow valve : 1419992198 Rack travel in mm : 11.15 Tolerance mm : + 0.05Inlet press. bar : 1.5 Del. quantity cm3/1000 strokes : 86.0 Test rozzle holde : 1688901101 assembly Tolerance cm3/1000 strokes 1.0 Opening pressure bar 208.5 Check tolerance Tolerance bar cm3/1000s. : +--3.0 Spreed Test lines : 1680750089 Tolerance cm3/1000 strokes : 3.5 Outside diameter :

8.0

| Check tolerance cm3/1000s. | : 6.0 | Tolerance mm : +- 0.50 |
|-------------------------------------|---------------------|---|
| Del. quantity cm3/1000 strokes | s : 12.0 | GUIDE SLEEVE POSITION |
| Tolerance cm3/1000 strokes | | Rated speed rpm : 1500 |
| Check tolerance cm3/1000s. | | Rack travel in mm : 10.00 Tolerance mm : +- 2.00 |
| Spreed Tolerance | | |
| cm3/1000 strokes Check tolerance | | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000s. | : 5.5 | Rated speed rpm : 1300 Aneroid pressure |
| (B) SETTING OF I WITH GOVERNOR | NJECTION PUMP | + hPa : 700 - Del. quantity - cm3/1000 strokes : 86.0 - Tolerance |
| GUIDE SLEEVE TRA | VEL | - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 3.0 |
| Rated speed rpm guide sleeve | : 300 | + cm3/1000s. : + 3.0 + Spreed + Tolerance |
| travel mm Tolerance mm | : 0.91 : ← 0.25 | + cm3/1000 strokes : 3.5 - Check tolerance |
| Rated speed rpm guide sleeve | : 1345 | cm3/1000s. : 6.0 |
| travel mm Tolerance mm | : 7.64 : +- 0.25 | RATED SPEED |
| Rated speed rpm guide sleeve | : 1140 | control lever position degree : 112.0 |
| travel mm Tolerance mm | : 5.88 : +- 0.25 | tolerance degree : +- 4.0 |
| Rated speed rpm guide sleeve | : 629 | + rack travel mm : 10.10 + Rated speed rpm : 1345 + Tolerance 1/min : ← 5 |
| travel mm Tolerance mm | : 3.15 : + 0.25 | + rack travel mm : 4.00 |
| Rated speed rpm guide sleeve | : 679 | Rated speed rpm : 1435 Tolerance 1/min : +- 15 |
| travel mm Tolerance mm | : 3.53 : + 0.25 | rack travel mm : 0.50 Tolerance mm : + 0.50 |
| Rated speed rpm guide sleeve | : 800 | Rated speed rpm : 1550 |
| travel mm Tolerance mm | : 4.00 : ← 0.25 | + LOW IDLE |
| Rated speed rpm guide sleeve | : 1596 | control lever position degree : 70.0 |
| travel mm Tolerance mm | : 12.00 : ← 0.25 | tolerance degree : +- 4.0 |
| Rated speed rpm guide sleeve | : 1690 | + Testing: + Rated speed rpm : 300 |
| travel mm | : 13.50 | + rack travel mm : 4.00 |

| cm3/1000 strokes : +- 1. Check tolerance cm3/1000s. : +- 4. Spreed Tolerance cm3/1000 strokes : 5. Check tolerance cm3/1000s. : 7. Aneroid pressure nPa : Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 71. Tolerance cm3/1000 strokes : +- 1. Check tolerance cm3/1000s. : +- 3. BREAKAWAY Rack travel in mm : 10.18 Rated speed rpm : 1345 Tolerance 1/min : +- STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity m3/1000 strokes : 125.6 Delarance m3/1000 strokes : +- 5.6 Delarance | | | |
|--|--|---------------|--------------------------|
| Check tolerance cm3/1000s. : + 4. Spreed Tolerance cm3/1000 strokes : 5. Check tolerance cm3/1000s. : 7. Aneroid pressure nPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 71. Tolerance cm3/1000 strokes : + 1. Check tolerance cm3/1000s. : + 3. BREAKAWAY Rack travel in mm : 10.1 Rated speed rpm : 1345 Tolerance 1/min : + STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity m3/1000 strokes : 125.0 Del. quantity m3/1000 strokes : + 5.0 Del. quantity m3/1000 strokes : + 5.0 Del. quantity m3/1000 strokes : + 5.0 Del. quantity Tolerance m3/1000 strokes : + 5.0 Del. quantity Tolerance | : +- 0.10 | | † Tolerance |
| Tolerance cm3/1000 strokes: 5. Check tolerance cm3/1000s. : 7. Ameroid pressure nPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes: 71. Folerance cm3/1000 strokes: + 1. Check tolerance cm3/1000s. : + 3. BREAKAWAY Rack travel in mm : 10.18 Rated speed rpm : 1345 Folerance 1/min : + STARTING FUEL DELIVERY Rated speed rpm : 100 rel. quantity m3/1000 strokes : 125.8 Folerance m3/1000 strokes : + 5.8 Folerance | : 200 | ‡ | Chark tolerance |
| Tolerance cm3/1000 strokes: Check tolerance cm3/1000s. Aneroid pressure nPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes: 71 Tolerance cm3/1000s. : + 3 REAKAWAY Rack travel in mm : 10. Reack speed rpm : 1345 Tolerance 1/min : + 5 TARTING FUEL DELIVERY maded speed rpm : 100 maded speed rpm : | + (| + (| cm3/1000s. : +- |
| ck tolerance /1000s. : roid pressure ed speed rpm : 50 . quantity /1000 strokes : +- ck tolerance /1000s. : +- AKAWAY ck travel in mm : 10 ed speed rpm : 134 erance 1/min : +- RTING FUEL DELIVERY ed speed rpm : 10 quantity /1000 strokes : 12 erance /1000 strokes : +- ck tolerance /1000 strokes : +- ck tolerance | + Tol | + Tole | erance |
| Aneroid pressure Pa : Rated speed rpm : 50 Del. quantity Del. quantity Del. duantity Del. quantity Del. quantity Del. quantity Del. quantity Del. duantity Del. duantity Del. del. duantity Del. del. duantity Del. del. del. del. del. del. del. del. d | 1 | <u>†</u> | Check tolerance |
| Rated speed rpm : 500 Del. quantity Del. quantity Del. quantity Del. quantity Del. quantity Del. quantity Delerance | : 1300 : 11.15 | ‡ | Aneroid pressure |
| cm3/1000 strokes: Folerance cm3/1000 strokes: Check tolerance cm3/1000s.: CREAKAWAY Rack travel in mm: 10 Rated speed rpm: 134 Folerance 1/min: CTARTING FUEL DELIVERY Rated speed rpm: 10 Rated speed rpm: | : + 0.05 | ‡ | Rated speed rpm : 50 |
| Cm3/1000 strokes : +- Check tolerance cm3/1000s. : +- CREAKAWAY Rack travel in mm : 10 Rated speed rpm : 134 Folerance 1/min : +- CTARTING FUEL DELIVERY Rated speed rpm : 10 Rel. quantity m3/1000 strokes : 12 Folerance m3/1000 strokes : +- heck tolerance | : 750 : 11.15 : +- 0.10 | ‡ | cm3/1000 strokes : 7 |
| REAKAWAY Rack travel in mm: 10 Rated speed rpm: 134 Tolerance 1/min: +- STARTING FUEL DELIVERY Rated speed rpm: 10 Rel. quantity Rated speed rpm: 12 Rolerance | : + 0.10 | <u> </u> | cm3/1000 strokes : +- |
| Rack travel in mm : 10 Rated speed rpm : 134 Folerance 1/min : +- STARTING FUEL DELIVERY Rated speed rpm : 10 Rel. quantity Rm3/1000 strokes : 12 Folerance Rm3/1000 strokes : +- Reck tolerance | ‡ | ‡ | |
| TARTING FUEL DELIVERY Stated speed rpm : 10 stated speed rpm : 10 sel. quantity m3/1000 strokes : 12 olerance m3/1000 strokes : +- heck tolerance | ‡ | ‡ | BREAKAWAY |
| Mated speed rpm : 1 wel. quantity m3/1000 strokes : 1 wolerance m3/1000 strokes : +- heck tolerance | : 500 : 700 : 11.15 : +- 0.05 | † † | |
| Pated speed rpm : 10 mel. quantity m3/1000 strokes : 12 folerance m3/1000 strokes : + heck tolerance | . 1 0.07 | | |
| el. quantity m3/1000 strokes : 12 olerance m3/1000 strokes : +- ! heck tolerance | : - | | STARTING FUEL DELIVERY |
| olerance m3/1000 strokes : +- 5 heck tolerance | : 500 : + 0.10 | + | - Del. quantity |
| heck tolerance | : 500 | ‡ | Tolerance |
| | : 250 + | + | Check tolerance |
| | | | I ON THE |
| ON THE | : > 100 | 1 | |
| OW IDLE | : > 80 : < 200 | <u> </u> | cm3/1000 strokes : 12. |
| el. quantity m3/1000 strokes : 12 | : < 220 | 1 | cm3/1000 strokes : +- 2. |
| el. quantity m3/1000 strokes : 12. olerance m3/1000 strokes : +- 2. | | | cm3/1000s. : +- 4. |
| el. quantity m3/1000 strokes : 12. olerance m3/1000 strokes : + 2. heck tolerance m3/1000s. : + 4. | | Ī | Tolerance |
| el. quantity m3/1000 strokes : 12.0 olerance m3/1000 strokes : \(- 2.0 heck tolerance m3/1000s. : \(+ 4.0 heck tolerance m3/1000s. : \(+ 4.0 heck tolerance | ARACTERISTICS + | 1 | COUNTRIES CEPANAC . 4 ' |
| el. quantity m3/1000 strokes : 12.0 olerance m3/1000 strokes : \(\to \) 2.0 heck tolerance m3/1000S. : \(\to \) 4.5 oreed olerance m3/1000 strokes : 3.5 heck tolerance | + | ‡ | Check tolerance |
| el. quantity m3/1000 strokes : 12.0 olerance m3/1000 strokes : \(- \) 2.0 heck tolerance m3/1000S. : \(- \) 4.5 oreed olerance m3/1000 strokes : 3.5 heck tolerance | ARACTERISTICS + 1 | + 0 | Check tolerance |

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 14.12.94 Test oil : ISO 4113 Combination No. : 0403244035 Injection pump Pump designation : PES4MW100/720RS1519 EP type number : 0413204018 Governor Governer design. : RQV300...1300Mw132 : -3 Governer no. : 0420083296 Cust. part No. : 0240740802 Customer-spec. information Customer : MB-NFZ : 0M364LA Motor Power KW 77.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1419992198 Inlet press. bar : 1.5 Test nozzle holde : 1688901101 assembly Opening pressure Tolerance bar

: 1680750089

8.0

x inside diameter : 3.0 x length mm : REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values __ BEGINNING OF DELIVERY Test pressure bar : Tolerance bar : +- 1.0 Prestroke mm Tolerance mm : +- 0.05 test only : + 0.10Rack travel in mm : 21.00 Firing order : 1-3-4-2 Phasing : 0-90-180-270 Tolerance : **←** 0.50 Check tolerance *NW : **←** 0.75 BASIC SETTING Rated speed rpm 1300 Rack travel in mm : 11.15 Tolerance mm : +- 0.05 Del. quantity cm3/1000 strokes : 86.0 Toterance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. : +-3.0 Spreed Tolerance cm3/1000 strokes : 3.5

Test lines

Outside diameter :

| Check tolerance cm3/1000s. | : 6.0 | + Tolerance mm : ← 0.50 |
|--|--------------------|--|
| Del. quantity cm3/1000 strokes | 12.0 | GUIDE SLEEVE POSITION |
| Tolerance cm3/1000 strokes | | Rated speed rpm : 1500 |
| Check tolerance cm3/1000s. | | Rack travel in mm: 10.00 |
| Spreed Tolerance | : +- 4.5 | + Tolerance mm : ← 2.00 |
| cm3/1000 strokes Check tolerance | 3.5 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000s. | : 5.5 | Rated speed rpm : 1300 Aneroid pressure |
| (B) SETTING OF I | NJECTION PUMP | hPa : 700 Del. quantity |
| WITH GOVERNOR | | cm3/1000 strokes : 86.0 |
| GUIDE SLEEVE TRA | VEL | cm3/1000 strokes : + 1.0 Check tolerance |
| Rated speed rpm | : 300 | + cm3/1000s. : + 3.0 + Spreed |
| guide sleeve | . 0.01 | + Tolerance |
| travel mm Tolerance mm | : ← 0.25 | + cm3/1000 strokes : 3.5 + Check tolerance |
| | | - cm3/1000s. : 6.0 |
| Rated speed rpm guide sleeve travel mm Tolerance mm | : 1345 | |
| travel mm | : 7.64 | + RATED SPEED |
| | | ‡ |
| Rated speed rpm guide sleeve | | control lever position degree : 112.0 |
| travel mm Tolerance mm | 5.88 | tolerance degree : +- 4.0 |
| | | rack travel mm : 10.10 Rated speed rpm : 1345 |
| Rated speed rpm guide sleeve | | + Rated speed rpm : 1345 + Tolerance 1/min : +- 5 |
| travel mm Tolerance mm | : 3.15 : ← 0.25 | † |
| TOTEL OF ICE IIII | · - 0.2 | + rack travel mm : 4.00 + Rated speed rpm : 1435 |
| Rated speed rpm guide sleeve | : 679 | Tolerance 1/min : + 15 |
| travel mm | : 3.53 | rack travel mm : 0.50 |
| Tolerance mm | : ← 0.25 | rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550 |
| Rated speed rpm guide sleeve | | |
| travel mm | : 4.00 | + LOW IDLE |
| Tolerance mm | : +- 0.25 | İ |
| Rated speed rpm guide sleeve | : 1596 | control lever position degree : 70.0 |
| travel mm | : 12.00 | tolerance degree : +- 4.0 |
| Tolerance mm | : ← 0.25 | + |
| Rated speed rpm | : 1690 | Testing: |
| guide sleeve travel mm | : 13.50 | + Rated speed rpm : 300 + rack travel mm : 4.00 |

| Tolerance mm | : ← 0.10 | + Tolerance |
|---|-------------------------|---|
| Rated speed rpm | . 200 | + cm3/1000 strokes : +- 1.5 |
| • | | Check tolerance cm3/1000s. : +- 4.0 |
| CRT mm min. | : > 4.50 | T Spreed |
| | | Tolerance + cm3/1000 strokes : 5.0 |
| TORQUE CONTROL | | + Check tolerance |
| Rated speed rom | • 1300 | ± cm3/1000s. : 7.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 11.15 | Aneroid pressure |
| Tolerance mm | : ← 0.05 | ∔ hPa · · - |
| Rated speed rpm | : 750 | Rated speed rpm : 500 |
| Rated speed rpm rack travel mm Tolerance mm | : 11.15 | Del. quantity cm3/1000 strokes : 71.0 |
| Tolerance mm | : ← 0.10 | + Tolerance |
| | | + cm3/1000 strokes : +- 1.0 |
| ANEROID/ALTITUDE | | Check tolerance cm3/1000s. : + 3.0 |
| COMPENSATOR TEST | | <u> </u> |
| | | BREAKAWAY |
| SETTING | | † |
| Rated speed rpm | : 500 | Rack travel in mm: 10.10 |
| Rated speed rpm Pressure hPa | : 700 | + Rated speed rom : 1345 |
| rack travel mm Tolerance mm | : 17.15 | Tolerance 1/min : +- 5 |
| roter arice hair | . 1 0.05 | Ī |
| MEASUREMENT | | |
| Pressure hPa | : - | STARTING FUEL DELIVERY |
| Rated speed rpm | : 500 | Rated speed rpm : 100 |
| Tolerance mm | : ← 0.10 | + Del. quantity + cm3/1000 strokes : 125.0 |
| Rated speed rpm | : 500 | + Tolerance |
| • | | + cm3/1000 strokes : $+$ 5.0 |
| rack travel mm | : <i>2</i> 50 • 0.30 | $\begin{array}{cccc} + & \text{Check tolerance} \\ + & \text{cm3/1000S.} & : + & 8.0 \end{array}$ |
| Pressure hPa rack travel mm Tolerance mm | : ← 0.10 | T (115/1005) |
| | | |
| START CUT-OUT | | |
| Pated coard com | : > 100 | + LOW IDLE |
| Rated speed rpm Check | : > 100 | Del. quantity |
| speed 1/min | : > 80 | + cm3/1000 strokes : 12.0 |
| Rated speed rpm Check | : < 200 | Tolerance |
| speed 1/min | : < 220 | cm3/1000 strokes : +- 2.0 Check tolerance |
| - | | + cm3/1000s. : +- 4.5 |
| FUEL DELIVERY CHA | RACTERISTICS | |
| ACT ACTACUL CON | intericted 1763 | - cm3/1000 strokes : 3.5 |
| Aneroid pressure | . 700 | † Check tolerance |
| hPa Rated speed rpm | : 700 : 750 | <u>†</u> cm3/1000s. : 5.5 |
| Del. quantity | | Į |
| cm3/1000 strokes | • 80 0 | <u>1</u> |

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 14.12.94 Test oil : ISO 4113

Combination No. : 0403246036

Injection pump

Pump designation : PES6Mw100/720RS1517

-5

EP type number : 0413206019

Governor

Governer design. : RQV300...1300MW132

: -4

Governer no. : 0420083299

Cust. part No. : 0240744402

Customer—spec. information Customer : MB-NF7

Motor : MS-NF2
Power KW : 155.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 21.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : ← 0.50

Check tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.30 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes :

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : - 1.0

Check tolerance cm3/1000s.

: ← 3.0

Spreed

| Tolerance cm3/1000 strokes | 3.5 | Rated speed rpm : 1780 guide sleeve |
|---|---------------------|---|
| Check tolerance cm3/1000s. | : 6.0 | travel mm : 13.50 Tolerance mm : +- 0.50 |
| Del. quantity cm3/1000 strokes | : 12.0 | GUIDE SLEEVE POSITION |
| Tolerance cm3/1000 strokes | : +- 2.0 | Rated speed rpm : 1450 |
| Check tolerance cm3/1000s. Spreed | : +- 4.5 | + Rack travel in mm : 13.00 + Tolerance mm : +- 2.00 |
| Tolerance cm3/1000 strokes | : 3.5 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Check tolerance cm3/1000s. | : 5.5 | Rated speed rpm : 1300 Aneroid pressure |
| (B) SETTING OF I | NJECTION PUMP | + hPa : 1000 + Del. quantity |
| WITH GOVERNOR | | + cm3/1000 strokes : 118.0 + Tolerance |
| GUIDE SLEEVE TRAN | VEL | cm3/1000 strokes : + 1.0 Check tolerance |
| Rated speed rpm guide sleeve | : 300 | + cm3/1000s. : + 3.0 + Spreed + Tolerance |
| travel mm Tolerance mm | : 1.02 : + 0.25 | cm3/1000 strokes : 3.5 |
| Rated speed rpm guide sleeve | : 1353 | - cm3/1000s. : 6.0 |
| travel mm Tolerance mm | : 6.70 : +- 0.25 | RATED SPEED |
| Rated speed rpm guide sleeve | : 1100 | - control lever - position degree : 120.0 |
| travel mm Tolerance mm | : 4.76 : + 0.25 | tolerance degree : +- 4.0 |
| Rated speed rpm guide sleeve | | rack travel mm : 12.30 Rated speed rpm : 1345 Tolerance 1/min : + 5 |
| travel mm Tolerance mm | : 2.25 : ← 0.25 | + rack travel mm : 4.00 |
| Rated speed rpm guide sleeve | : 540 | Rated speed rpm : 1485 Tolerance 1/min : + 15 |
| travel mm Tolerance mm | : 2.50 : + 0.25 | rack travel mm : 0.50 Tolerance mm : +- 0.50 |
| Rated speed rpm guide sleeve | : 710 | Rated speed rpm : 1550 |
| travel mm Tolerance mm | : 3.03 : ← 0.25 | LOW IDLE |
| Rated speed rpm guide sleeve | | control lever position degree : 72.0 |
| travel mm Tolerance mm | : 12.00 : + 0.25 | tolerance degree : +- 4.0 |
| | | + Testing: |

| Rated speed rpm rack travel mm Tolerance mm | : 300 : 3.80 : ← 0.10 | Check speed 1/min : < 220 |
|---|-----------------------------|--|
| Rated speed rpm | | FUEL DELIVERY CHARACTERISTICS |
| CRT mm min. | : > 4.50 | + Aneroid pressure + hPa : 1000 + Rated speed rpm : 750 |
| TORQUE CONTROL | | Del. quantity cm3/1000 strokes : 117.0 |
| Rated speed rpm rack travel mm | : 13.30 | + Tolerance + cm3/1000 strokes : +- 1.5 + Check tolerance + cm3/1000S. : +- 4.0 |
| Tolerance mm | | + Spreed |
| Rated speed rpm rack travel mm Tolerance mm | : 13.30 : ← 0.10 | + Tolerance + cm3/1000 strokes : 5.5 + Check tolerance |
| Rated speed rpm rack travel mm Tolerance mm | : 600 : 13.30 | cm3/1000S. : 7.0 Aneroid pressure |
| Tolerance mm | : +- 0.10 | hPa : 1000 Rated speed rpm : 600 Del. quantity |
| ANEROID/ALTITUDE COMPENSATOR TEST | | + cm3/1000 strokes : 119.0 + Tolerance |
| SETTING | | - cm3/1000 strokes : +- 1.5 - Check tolerance - cm3/1000s. : +- 4.0 |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1000 : 13.30 | Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 48.0 |
| MEASUREMENT | | Tolerance cm3/1000 strokes : +- 1.0 |
| Pressure hPa Rated speed rpm Tolerance mm | 500 + 0.10 | + Check tolerance + cm3/1000s. : + 3.0 |
| Rated speed rpm | : 500 | BREAKAWAY |
| Pressure hPa rack travel mm Tolerance mm | : 600 : 3.00 : ← 0.10 | Rack travel in mm : 12.30 Rated speed rpm : 1345 |
| Pressure hPa rack travel mm Tolerance mm | : 1.20 | Tolerance 1/min : +- 5 |
| | | STARTING FUEL DELIVERY |
| START CUT-OUT | | Rated speed rpm : 100 Del. quantity |
| Rated speed rpm Check | | + cm3/1000 strokes : 150.0 + Tolerance |
| speed 1/min Rated speed rpm | : > 80 : < 200 | cm3/1000 strokes : +- 5.0 Check tolerance |
| | | + cm3/1000s. : +- 8.0 |

LOW IDLE

| Del. quantity | | |
|------------------|------|------|
| cm3/1000 strokes | : | 12.0 |
| Tolerance | | |
| cm3/1000 strokes | : +- | 2.0 |
| Check tolerance | | |
| cm3/1000s. | : + | 4.5 |
| Spreed | | |
| Tolerance | | |
| cm3/1000 strokes | : | 3.5 |
| Check tolerance | | |
| cm3/1000s | • | 5 5 |

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 14.12.94 : ISO 4113 Test oil Combination No. : 0403246038 Injection pump Pump designation : PES6MW100/720RS1517 : -2 EP type number : 0413206019 Governor Governer design. : RQV300...1300MW132 : -10 Governer no. : 0420083315 Cust. part No. : 0250743902

| Customer-spec. | information | |
|----------------|-------------|--|
| Customer | : MB-NFZ | |
| Motor | : 0M366LA | |
| Power KW | : 155.0 | |

TEST BENCH REQUIREMENTS

| Test oil inlet | | |
|----------------|------|-----|
| temp. °C | : | 40 |
| Tolerance °C | : +- | 2.0 |

| Inlet | press. | bar | • | 1 | 5 |
|-------|--------|-----|---|---|---|

| assembl | .У | | | : | 1688901101 |
|---------|----|--|--|---|------------|
|---------|----|--|--|---|------------|

Opening pressure

B04

| bar | | : | | 208.5 |
|-----------|-----|---|----|-------|
| Tolerance | bar | : | +- | 1.5 |

Outside diameter : 8.0

| х | inside | diameter | : | 3.0 |
|---|--------|----------|---|-----|
| X | Length | mm | : | 600 |

REMARKS

| (A) | INJECTION PUMP equal delivery | SETTING | VALUES |
|-----|-------------------------------|---------|--------|
| | | quant. | |
| per | values | | |

BEGINNING OF DELIVERY

| Test press | | : | | 31.0 |
|------------|-----|---|---|------|
| Tolerance | bar | : | + | 1.0 |

Prestroke mm :
$$4.55$$
Tolerance mm : $\leftarrow 0.05$
test only : $\leftarrow 0.10$

| Phasing | : 0-60-120-180-240 : -300 |
|---------|------------------------------|
| | -300 |

BASIC SETTING

| Rated | speed | rpm | : | 1300 |
|-------|-------|-----|---|------|
|-------|-------|-----|---|------|

| Rack travel in | mm | : | | 13.30 |
|----------------|----|---|----|-------|
| Tolerance mm | | : | +- | 0.05 |

| Tolerance cm3/1000 strokes | : 3.5 | Rated speed rpm : 1780 guide sleeve travel mm : 13.50 |
|---|---------------------|--|
| Check tolerance cm3/1000s. | : 6.0 | Tolerance mm : + 0.50 |
| Del. quantity cm3/1000 strokes | : 12.0 | GUIDE SLEEVE POSITION |
| Tolerance cm3/1000 strokes | : - 2.0 | Rated speed rpm : 1450 |
| Check tolerance cm3/1000s. Spreed | : +- 4.5 | Rack travel in mm : 11.00 Tolerance mm : + 2.00 |
| Tolerance cm3/1000 strokes | : 3.5 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Check tolerance cm3/1000S. | | Rated speed rpm : 1300 |
| | | Aneroid pressure hPa : 1000 |
| (B) SETTING OF IN | NJECTION PUMP | Del. quantity cm3/1000 strokes : 118.0 |
| | | Tolerance cm3/1000 strokes : + 1.0 |
| GUIDE SLEEVE TRAN | /EL | Check tolerance cm3/1000s. : +- 3.0 |
| Rated speed rpm guide sleeve | : 300 | Spreed Tolerance |
| travel mm Tolerance mm | : 1.02 : +- 0.25 | - cm3/1000 strokes : 3.5 Check tolerance |
| Rated speed rpm | : 1354 | - cm3/1000s. : 6.0 |
| guide sleeve travel mm Tolerance mm | : 6.71 : ← 0.25 | RATED SPEED |
| Rated speed rpm | : 1090 | control lever |
| guide sleeve travel mm Tolerance mm | : 4.70 : +- 0.25 | position degree : 120.0 tolerance degree : +- 4.0 |
| Rated speed rpm guide sleeve | | rack travel mm : 12.30 Rated speed rpm : 1345 Tolerance 1/min : +- 5 |
| travel mm Tolerance mm | : 2.25 : +- 0.25 | rack travel mm : 4.00 |
| Rated speed rpm | : 540 | Rated speed rpm : 1485 Tolerance 1/min : +- 15 |
| guide sleeve travel mm Tolerance mm | : 2.54 : +- 0.25 | rack travel mm : 0.50 Tolerance mm : + 0.50 |
| Rated speed rpm guide sleeve | : 690 | Rated speed rpm : 1550 |
| travel mm Tolerance mm | : 2.97 : ← 0.25 | LOW IDLE |
| Rated speed rpm guide sleeve | : 1683 | control lever position degree : 72.0 |
| travel mm Tolerance mm | : 12.00 : + 0.25 | tolerance degree : + 4.0 |
| | | + Testing: |

| Rated speed rpm rack travel mm Tolerance mm | : 3.80 | ‡ | Check speed 1/min | : < 220 |
|---|------------------------------|---|--|--|
| Rated speed rpm | | 1 | FUEL DELIVERY CHA | ARACTERISTICS |
| CRT man min. | | | Aneroid pressure hPa Rațed speed rpm | : 1000 : 750 |
| TORQUE CONTROL | | + | Del. quantity cm3/1000 strokes | : 117.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 13.30 | ‡ | Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | |
| Rated speed rpm rack travel mm Tolerance mm | : 750 : 13.30 : ← 0.10 | +++++++++++++++++++++++++++++++++++++++ | Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : 5.5 |
| Rated speed rpm rack travel mm Tolerance mm | : 13.30 | + + + + | Aneroid pressure hPa Rated speed rpm Del. quantity | : 1000 : 600 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | + | cm3/1000 strokes Tolerance | |
| SETTING | | + | cm3/1000 strokes Check tolerance cm3/1000s. | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1000 : 13.30 | + + + + + + + + + + + + + + + + + + + | Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance | : 104.0 |
| Pressure hPa Rated speed rpm Tolerance mm | | ‡ ‡ | cm3/1000 strokes Check tolerance cm3/1000s. | : + 1.5 : + 3.0 |
| Rated speed rpm | : 500 | ‡ | Aneroid pressure hPa | : |
| Pressure hPa rack travel mm Tolerance mm | : 3.00 | ‡ | Rated speed rpm Del. quantity cm3/1000 strokes Tolerance | |
| Pressure hPa rack travel mm Tolerance mm | : 300 | ‡ | cm3/1000 strokes Check tolerance cm3/1000s. | : +- 1.0 : +- 3.0 |
| START CUT-OUT | · | ‡ | BREAKAWAY | r de la comitación de la comit ación de la comitación de |
| Rated speed rpm Check speed 1/min Rated speed rpm | : > 80 | +++++++++++++++++++++++++++++++++++++++ | Rack travel in mm Rated speed rpm Tolerance 1/min | : 1345 |

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes :

150.0

Tolerance

cm3/1000 strokes : +-5.0

Check tolerance cm3/1000s.

8.0

LOW IDLE

Del. quantity cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. 4.5

Spreed

Tolerance cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s.5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.12.94 : ISO 4113 Test oil

Combination No. : 0403474025

Injection pump

Pump designation : PES4MW100/720RS1235

EP type number : 0413404121

Governor

Governer design. : RSV350...1200MWOA346

Governer no. : 0420085179

Cust. part No. : 0260740602

Customer-spec, information Customer : MB-NFZ : OM 364 A Motor

Power KW 77.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

173.5

Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm :

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 3.75 Tolerance mm : +- 0.05

test only : +- 0.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm 1200

Rack travel in mm: 11.55 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 89.0

| | , | |
|---|---------------------|---|
| Tolerance cm3/1000 strokes | : + 1.0 | Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 |
| Check tolerance cm3/1000s. | : + 3.0 | |
| Spreed Tolerance | | RATED SPEED |
| cm3/1000 strokes Check tolerance | : 3.5 | control lever position degree : 108.0 |
| cm3/1000s. | : 6.0 | tolerance degree : +- 4.0 rack travel mm : 1.00 |
| Del. quantity cm3/1000 strokes Tolerance | <u> </u> | Tolerance mm : + 0.70 Rated speed rpm : 1450 |
| cm3/1000 strokes Check tolerance cm3/1000S. | : + 2.0 : + 4.5 | rack travel mm : 4.00 Rated speed rpm : 1340 |
| Spreed Tolerance cm3/1000 strokes | 1 | rack travel mm : 10.50 Rated speed rpm : 1248 Tolerance 1/min : + 8 |
| Check tolerance cm3/1000s. | : 5.5 | Tolerance 1/min : +- 8 |
| | + | LOW IDLE |
| (B) SETTING OF INJ WITH GOVERNOR | JECTION PUMP | Setting point w/out bumper spring |
| | | Rated speed rpm : 350 rack travel mm : 6.40 |
| GUIDE SLEEVE POSIT | TION | Testing: |
| control lever | 1 | rack travel mm : 2.00 |
| position degree Rated speed rpm | : - 3 : 800 | Rated speed rpm : 100 |
| Rack travel in mm Tolerance mm | : 0.65 : +- 0.35 | CRT mm min. : > 19.00 |
| | + | TORQUE CONTROL |
| governor spring pre-tension click setting x | : 5.80 | Rated speed rpm : 1200 rack travel mm : 11.55 Tolerance mm : + 0.05 |
| FULL LOAD DELIVERY | AT FULL LOAD STOP | Rated speed rpm : 600 |
| Rated speed rpm Aneroid pressure | : 1200 | rack travel mm : 12.40 Tolerance mm : +- 0.10 |
| hPa Del. quantity | : 700 | Rated speed rpm : 1000 |
| cm3/1000 strokes Tolerance | 1 | rack travel mm : 12.00 Tolerance mm : +- 0.10 |
| cm3/1000 strokes | 1 | ANCOAD (ALTERIA |
| Check tolerance cm3/1000s. Spreed | | ANEROID/ALTITUDE COMPENSATOR TEST |

SETTING

| Rated speed rpm | : | 500 |
|-----------------|-----|--------|
| Pressure hPa | : | 700 |
| rack travel mm | : | 12.40 |
| Tolerance mm | : + | - 0.10 |

MEASUREMENT

| Pressure hPa | : | _ |
|-----------------|-----|--------|
| Rated speed rpm | : | 500 |
| rack travel mm | : | 9.95 |
| Tolerance mm | : + | - 0.05 |

| Rated | speed | rom | • | 500 |
|-------|-------|------|---|-----|
| Rateu | speeu | rpin | | ンじし |

| Pressure hPa | : | 375 |
|----------------|-----|---------------|
| rack travel mm | : | 11.65 |
| Tolerance mm | : - | ⊢ 0.15 |

| Pressure hPa | : | 200 |
|----------------|-----|--------|
| rack travel mm | : | 10.45 |
| Tolerance mm | : + | - 0.05 |

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

| hPa | : | 700 |
|------------------|---|------|
| Rated speed rpm | : | 600 |
| Del. quantity | | |
| cm3/1000 strokes | : | 85.0 |
| Tolerance | | |

| cm3/1000 strokes Check tolerance | : +- | 1.5 |
|-------------------------------------|------|-----|
| cm3/1000s. | : +- | 4.0 |
| Spreed | | |

| Tolerance | | |
|------------------|---|-----|
| cm3/1000 strokes | : | 5.0 |
| Check tolerance | | |
| cm3/1000s. | : | 7.0 |

Aneroid pressure

| rescribing pressure | | |
|---------------------|---|-----|
| hPa | : | - |
| Rated speed rpm | : | 500 |
| Del. quantity | | |
| cm3/1000 strokes | | 50 |

| cm3/1UUU strokes | : | 50.0 |
|------------------|------|------|
| Tolerance | | |
| cm3/1000 strokes | : +- | 1.0 |
| Chack talerance | | |

| Check tolerance | | |
|-----------------|------|-----|
| cm3/1000s. | : +- | 3.0 |

STARTING FUEL DELIVERY

| Rated | speed | r rym | • | 100 |
|-------|-------|--------|---|-----|
| Marca | 2hccn | (pail | • | 100 |

| Del. quantity cm3/1000 strokes | : | 80.0 |
|--------------------------------|------|------|
| Tolerance cm3/1000 strokes | | 5.0 |
| Check tolerance cm3/1000s. | : +- | |

LOW IDLE

| Del. quantity | | |
|------------------|------|------|
| cm3/1000 strokes | : | 12.0 |
| Tolerance | | |
| cm3/1000 strokes | : +- | 2.0 |
| Check tolerance | | |
| cm3/1000s. | : + | 4.5 |
| Spreed | | |
| Tolerance | | |
| cm3/1000 strokes | : | 3.5 |
| Check tolerance | • | |
| cm3/1000s. | • | 5.5 |
| | • | 2.5 |

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.12.94 Test oil : ISO 4113

Combination No. : 0403474026

Injection pump

Pump designation : PES4MW100/720RS1235

EP type number : 0413404121

Governor

Governer design. : RSV350...1300MWDA346

Governer no. : 0420085177

Cust. part No. : 0260740702

Customer-spec. information Customer : MB-NFZ Motor : 0M364A

Power KW 79.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar :

Test nozzle holde

assembly : 0681343009

Opening pressure

173.5 Tolerance bar

Test Lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm :

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance °NW : + - 0.75

BASIC SETTING

Rated speed rpm 1300

Rack travel in mm : Tolerance mm

Del. quantity cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : +-1.0

| Check tolerance cm3/1000s. | : +- 3.0 | |
|-------------------------------------|---------------------|--|
| Spreed | ‡ | RATED SPEED |
| Tolerance cm3/1000 strokes | : 3.5 | control lever position degree : 110.0 |
| Check tolerance cm3/1000s. | : 6.0 | tolerance degree : +- 4.0 |
| Del. quantity | ‡ | rack travel mm : 1.00 Tolerance mm : +- 0.70 |
| cm3/1000 strokes Tolerance | : 12.0 | Rated speed rpm : 1550 |
| cm3/1000 strokes Check tolerance | : ← 2.0 | rack travel mm : 4.00 Rated speed rpm : 1425 |
| cm3/1000s. Spreed | : ← 4.5 | |
| Tolerance | 7. | rack travel mm : 9.80 Rated speed rpm : 1345 |
| cm3/1000 strokes Check tolerance | 1 | Tolerance 1/min : +- 5 |
| cm3/1000S. | : 5.5 | LOW IDLE |
| (B) SETTING OF IN | VJECTION PUMP | Setting point w/out bumper spring |
| WITH GOVERNOR | Ţ | Rated speed rpm : 350 |
| | | rack travel mm : 6.40 |
| GUIDE SLEEVE POSI | ITION | Testing: |
| control lever | + | rack travel mm : 2.00 |
| position degree | | Rated speed rpm : 460 Tolerance 1/min : +- 40 |
| Rated speed rpm | + | Rated speed rpm : 100 |
| Rack travel in mm Tolerance mm | | CRT mm min. : > 19.00 |
| governor spring | 1 | |
| pre-tension click setting x | + | TORQUE CONTROL |
| | · 4.00 T | Rated speed rpm : 1300 |
| FULL LOAD DELIVER | Y AT FULL LOAD STOP | rack travel mm : 10.85 Tolerance mm : +- 0.05 |
| Rated speed rpm | : 1300 | Rated speed rpm : 600 |
| Aneroid pressure hPa | : 700 | rack travel mm : 11.75 Tolerance mm : +- 0.05 |
| Del. quantity cm3/1000 strokes | : 83.0 | Rated speed rpm : 1800 |
| Tolerance cm3/1000 strokes | 4 | rack travel mm : 11.75 |
| Check tolerance cm3/1000s. | - | Tolerance mm : +- 0.05 |
| Spreed | : + 3.0 | Rated speed rpm : 1175 rack travel mm : 11.15 |
| Tolerance cm3/1000 strokes | : 3.5 | Tolerance mm : +- 0.15 |
| Check tolerance cm3/1000s. | : 6.0 | |
| | L | |

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 700 rack travel mm 11.75 Tolerance mm : **←** 0.05

MEASUREMENT

Pressure hPa Rated speed rpm 500 9.85 rack travel mm Tolerance mm 0.05

Rated speed rpm 500

Pressure hPa 300 11.30 rack travel mm Tolerance mm : +- 0.15

Pressure hPa 200 rack travel mm 10.80 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure 700 hPa Rated speed rpm 600 Del. quantity cm3/1000 strokes 76.5 Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes 5.0 Check tolerance cm3/1000s.

7.0

Aneroid pressure

hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes 47.0 Tolerance

cm3/1000 strokes 1.0 Check tolerance

cm3/1000s. : +-3.0

STARTING FUEL DELIVERY

Rated speed rpm 100 Del. quantity cm3/1000 strokes 83.0 Tolerance cm3/1000 strokes 5.0 Check tolerance cm3/1000s.8.0

LOW IDLE

| ~ | | |
|--|------|------|
| Del. quantity cm3/1000 strokes Tolerance | : | 12.0 |
| cm3/1000 strokes Check tolerance | : + | 2.0 |
| cm3/1000s. Spreed | : +- | 4.5 |
| Tolerance | | |
| cm3/1000 strokes Check tolerance | : | 3.5 |
| cm3/1000s. | : | 5.5 |

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.12.94 Test oil : ISO 4113

Combination No. : 0403476069

Injection pump

Pump designation : PES6MW100/720RS1129

EP type number : 0413406121

Governor

Governer design. : RSV750...1250MW0A325

: -2

: 0420085115 Governer no.

Cust. part No. : 0110748602

Customer-spec. information

: MB-NFZ Customer : 0M 366 LA Motor

Power KW : 146.0

TEST BENCH REQUIREMENTS

Test oil inlet

tempo. °C Tolerance °C 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar 208.5 Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 3.75 Tolerance mm : +- 0.05

test only : ← 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1230

Rack travel in mm : 11.55 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 97.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance cm3/1000s.

: +-3.0

Spreed

| Tolerance cm3/1000 strokes : 3.5 | - control lever - position degree : 98.0 |
|--|---|
| Check tolerance cm3/1000s. : 6.0 | tolerance degree : +- 4.0 |
| Del. quantity cm3/1000 strokes : 12.0 Tolerance | rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1350 |
| cm3/1000 strokes : +- 2.0 Check tolerance | LOW IDLE |
| cm3/1000s. : +- 4.5 Spreed | |
| Tolerance cm3/1000 strokes : 3.5 | control lever position degree : 78.0 |
| Check tolerance cm3/1000s. : 5.5 | tolerance degree : +- 4.0 |
| tilis/ 10003 | Testing: |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | Rated speed rpm : 750 rack travel mm : 4.70 Tolerance mm : + 0.10 |
| GUIDE SLEEVE POSITION | rack travel mm : 2.00 Rated speed rpm : 780 Tolerance 1/min : +- 30 |
| control lever | Rated speed rpm : 100 |
| position degree : - 3 Rated speed rpm : 800 | CRT mm min. : > 19.00 |
| Rack travel in mm : 0.65 Tolerance mm : + 0.35 | TORQUE CONTROL |
| governor spring pre-tension click setting x : 2.50 | Rated speed rpm : 1230 rack travel mm : 11.55 Tolerance mm : + 0.05 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | Rated speed rpm : 750 |
| . ↓ | rack travel mm : 11.55 Tolerance mm : +- 0.10 |
| Rated speed rpm : 1230 Aneroid pressure hPa : - | |
| Del. quantity | |
| cm3/1000 strokes : 97.0 | FUEL DELIVERY CHARACTERISTICS |
| cm3/1000 strokes : + 1.0 Check tolerance | Aneroid pressure |
| cm3/1000s. : + 3.0 | hPa : - Rated speed rpm : 750 |
| Tolerance | Del. quantity cm3/1000 strokes : 90.0 |
| cm3/1000 strokes : 3.5 Check tolerance | Tolerance cm3/1000 strokes : +- 1.5 |
| cm3/1000s. : 6.0 | Check tolerance cm3/1000s. : +- 4.0 |
| RATED SPEED | Spreed Tolerance |
| + | cm3/1000 strokes : 5.0 |

Check tolerance cm3/1000s. : 7.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 93.0
Tolerance
cm3/1000 strokes : + 5.0
Check tolerance
cm3/1000s. : + 8.0

LOW IDLE

Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +-4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.12.94 Test oil : ISO 4113

Combination No. : 0403476080

Injection pump

Pump designation : PES6MW100/720RS1191

EP type number : 0413406179

Governor

Governer design. : RSV350...1300Mw0A329

: -6

Governer no. : 0420085136

Cust. part No. : 0180747702

Customer—spec. information Customer : MB—NFZ

Motor : OM 366 LA

Power KW : 170.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1280

Rack travel in mm : 14.05 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 111.0

Tolerance

cm3/1000 strokes : + 1.0

| Check tolerance cm3/1000s. | : +- 3.0 | RATED SPEED |
|--|--------------------|--|
| Spreed Tolerance | | T RATED SPEED |
| cm3/1000 strokes | : 3.5 | control lever position degree : 109.0 |
| Check tolerance cm3/1000s. | : 6.0 | tolerance degree : +- 4.0 |
| Del. quantity cm3/1000 strokes Tolerance | | + rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1550 |
| cm3/1000 strokes Check tolerance | | LOW IDLE |
| cm3/1000s. Spreed Tolerance | : +- 4.5 | t control lever |
| cm3/1000 strokes Check tolerance | | position degree : 79.0 tolerance degree : + 4.0 |
| cm3/1000s. | : 5.0 | Testing: |
| (B) SETTING OF INJ WITH GOVERNOR | ECTION PUMP | Rated speed rpm : 350 rack travel mm : 6.10 Tolerance mm : +- 0.10 |
| GUIDE SLEEVE POSIT | TON | rack travel mm : 2.00 |
| | | Rated speed rpm : 100 |
| | : - 3 : 800 | CRT mm min. : > 19.00 |
| Rack travel in mm | : 0.65 | TORQUE CONTROL |
| Tolerance mm governor spring | : 0.35 | Rated speed rpm : 1280 rack travel mm : 14.05 Tolerance mm : +- 0.05 |
| pre-tension click setting x | : 4.00 | Rated speed rpm : 600 |
| | | rack travel mm : 14.05 Tolerance mm : + 0.10 |
| FULL LOAD DELIVERY | | |
| Rated speed rpm : Aneroid pressure hPa : | 1280 | + ANEROID/ALTITUDE + COMPENSATOR TEST |
| Del. quantity cm3/1000 strokes : | 111.0 | + SETTING |
| Tolerance cm3/1000 strokes : | + 1.0 | Rated speed rpm : 500 |
| Spreed | 3.0 | + Pressure hPa : 1000 + rack travel mm : 14.05 + Tolerance mm : + 0.05 |
| Tolerance cm3/1000 strokes : Check tolerance | 3.5 | MEASUREMENT |
| cm3/1000s. : | 6.0 | Pressure hPa : - Rated speed rpm : 500 |

| rack travel mm | : 10.15 |
|-----------------|-----------|
| Tolerance mm | : +- 0.05 |
| Rated speed rpm | : 500 |
| Pressure hPa | : 500 |
| rack travel mm | : 12.55 |
| Tolerance mm | : ← 0.15 |
| Pressure hPa | : 350 |
| rack travel mm | : 11.35 |
| Tolerance mm | : + 0.05 |

| FUEL | DEL TUERY | CHARACTERISTICS |
|---------|-----------|-----------------|
| , 0,,,, | | CHAMACHEUT21172 |

| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : 1000 : 600 : 105.0 : +- 1.5 : +- 4.0 |
|--|--|
| Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000S. | : 5.0 : 7.0 |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance | : - : 500 : 35.0 |
| cm3/1000 strokes Check tolerance | : + 1.0 : + 3.0 |
| Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes | : 7.0 : - : 500 : 35.0 |

STARTING FUEL DELIVERY

| Rated speed rpm | : | 100 | |
|------------------|-----|-------|--|
| Del. quantity | | | |
| cm3/1000 strokes | : | 105.0 | |
| Tolerance | | | |
| cm3/1000 strokes | : + | - 5.0 | |
| Check tolerance | | | |
| cm3/1000s. | : + | - 8.0 | |

LOW IDLE

| vet. quantity | | |
|------------------|------|------|
| cm3/1000 strokes | : | 11.0 |
| Tolerance | | |
| cm3/1000 strokes | : +- | 2.0 |
| Check tolerance | | |
| cm3/1000s. | : +- | 4.5 |
| Spreed | | |
| Tolerance | | |
| cm3/1000 strokes | : | 3.5 |
| Check tolerance | | |
| cm3/1000s. | : | 5.0 |

| BOSCH INJ. PUMP | TEST SPECIFICATIONS | + x length mm : 600 |
|---|--|--|
| Note remarks | | |
| Refer to Service adjustment instru See microcard(s) | Info for test and uctions. W400/ | REMARKS |
| Edition Test oil | : 16.12.94 : ISO 4113 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Combination No. | : 0400463121 | per vacues |
| Injection pump Pump designation EP type number | : PES3A80D410/3RS1324 : 0410483017 | BEGINNING OF DELIVERY |
| Governor Governer design. | : RSV325900A7C602 | Prestroke mm : 1.95 Tolerance mm : +- 0.05 |
| Governer no. | : -4L : 0420232604 | test only : +- 0.10 |
| Cust. part No. | | Rack travel in mm : 10.50 Tolerance mm : +- 1.50 |
| out part to. | • | Firing order : 1- 3- 2 |
| Customer—spec. in Customer Motor TEST BENCH REQUIR | : KHD : F3L912 | Phasing : 0-120-240 Tolerance : +- 0.50 Check tolerance °NW : +- 0.75 |
| Test oil inlet temp. °C Tolerance °C | : 40 : + 2.0 | BASIC SETTING Rated speed rpm : 880 |
| Overflow valve | : 1419992198 - | Rack travel in mm : 11.20 Tolerance mm : + 0.05 |
| Inlet press. bar | : 1.5 | Del. quantity cm3/1000 strokes : 50.5 |
| Test nozzle holde assembly | : 0681343009 | Tolerance cm3/1000 strokes : +- 0.5 |
| Opening pressure bar Tolerance bar | : 173.5 : +- 1.5 | Check tolerance : +- 2.0 |
| Test lines | : 1680750014 | - Spreed - Tolerance - cm3/1000 strokes : 2.5 |
| Outside diameter | : 6.0 | - Check tolerance - cm3/1000s. : 4.0 |
| x inside diameter | : 2n I | · • • • • • • • • • • • • • • • • • • • |

x inside diameter :

2.0

| 2nd speed rpm : 325 | Tolerance 1/min : +- 5 |
|--|---|
| Rack travel in mm : 8.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 11.0 | rack travel mm : 4.00 Rated speed rpm : 960 Tolerance 1/min : +- 15 |
| Tolerance cm3/1000 strokes : +- 1.5 | rack travel mm : 0.85 Tolerance mm : +- 0.55 |
| Check tolerance cm3/1000s. : +- 3.5 Spreed | Rated speed rpm : 1100 rack travel mm : 4.00 |
| Tolerance cm3/1000 strokes : 4.0 check tolerance | - rack travel mm : 4.00 - Rated speed rpm : 975 |
| cm3/1000s. : 6.0 | - LOW IDLE |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 77.0 tolerance degree : +- 4.0 |
| GUIDE SLEEVE POSITION | Setting point w/out bumper spring |
| control lever | - Rated speed rpm : 325 - rack travel mm : 8.10 |
| position degree : -3 Rated speed rpm : 800 | Testing: |
| Rack travel in mm : 0.50 Tolerance mm : + 0.20 | Rated speed rpm : 325 rack travel mm : 8.60 Tolerance mm : + 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 880 | rack travel mm : 2.00 Rated speed rpm : 450 Tolerance 1/min : +- 30 |
| Aneroid pressure | TORQUE CONTROL |
| Del. quantity cm3/1000 strokes : 50.5 Tolerance | Rated speed rpm : 880 |
| cm3/1000 strokes : + 0.5 Check tolerance | rack travel mm : 11.20 Tolerance mm : +- 0.05 |
| cm3/1000s. : + 2.0 Spreed Tolerance | Rated speed rpm : 500 rack travel mm : 11.25 |
| cm3/1000 strokes : 2.5 Check tolerance | Tolerance mm : +- 0.10 |
| cm3/1000s. : 4.0 | |
| RATED SPEED | BREAKAWAY |
| control lever position degree : 108.0 tolerance degree : + 4.0 | Rack travel in mm : 10.20 Rated speed rpm : 925 Tolerance 1/min : +- 5 |
| rack travel mm : 10.20 Rated speed rpm : 925 | |
| | |

STARTING FUEL DELIVERY

Rated speed rpm 100 20.25 rack travel mm : **←** 0.75 Tolerance mm Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes 7.5 Check tolerance cm3/1000s.

: + 10.0

LOW IDLE

Rated speed rpm 325 8.60 rack travel mm Tolerance mm : + 0.10Del. quantity cm3/1000 strokes 11.0 Tolerance cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s. 3.5 Spreed Tolerance cm3/1000 strokes 4.0 Check tolerance cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.12.94 Test oil : ISO 4113

Combination No. : 0400463123

Injection pump

Pump designation : PES3A80D410/3RS1324

EP type number : 0410483017

Governor

Governer design. : RSV325...1150A8C275L

Governer no. : 0420232305

Cust. part No. :

Customer—spec. information Customer : KHD

Motor : F3L912

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

173.5 Tolerance bar

Test lines : 1680750014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values

BEGINNING OF DELIVERY

Prestroke mm 1.95 Tolerance mm : +- 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1- 3- 2

Phasing : 0-120-240 Tolerance : **←** 0.50

Check

tolerance °NW : + - 0.75

BASIC SETTING

Rated speed rpm 1150

Rack travel in mm : 10.65 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes 50.5

Tolerance

0.5

: +-

cm3/1000 strokes Check tolerance

cm3/1000s. 2.0

Spreed

Tolerance

cm3/1000 strokes : 2.0

Check tolerance

cm3/1000s. 3.5

2nd speed rpm : 325

B23

| Rack travel in mm : 8.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s : + 4.5 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance | rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : +- 15 rack travel mm : 1.00 Tolerance mm : +- 0.70 Rated speed rpm : 1350 rack travel mm : 4.00 Rated speed rpm : 1240 |
|---|---|
| cm3/1000s. : 3.0 | LOW IDLE |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 70.0 tolerance degree : +- 4.0 |
| GUIDE SLEEVE POSITION | + Setting point w/out bumper spring |
| control lever | Rated speed rpm : 325 rack travel mm : 8.10 |
| position degree : - 3 Rated speed rpm : 800 | Testing: |
| Rack travel in mm: 0.65 Tolerance mm: + 0.35 | Rated speed rpm : 325 rack travel mm : 8.60 Tolerance mm : +- 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | rack travel mm : 2.00 Rated speed rpm : 680 |
| Rated speed rpm : 1150 Aneroid pressure | Tolerance 1/min : + 30 |
| hPa : - Del. quantity | TORQUE CONTROL |
| cm3/1000 strokes : 50.5 Tolerance | Dimension a mm : 1.30 |
| cm3/1000 strokes : +- 0.5 Check tolerance | Rated speed rpm : 1150 rack travel mm : 10.65 Tolerance mm : + 0.05 |
| cm3/1000s. : +- 2.0 Spreed | rack travel mm : 10.65 Tolerance mm : + 0.05 |
| Tolerance cm3/1000 strokes : 2.0 | Rated speed rpm : 600 rack travel mm : 11.95 |
| Check tolerance cm3/1000s. : 3.5 | Tolerance mm : +- 0.05 |
| RATED SPEED | Rated speed rpm : 800 rack travel mm : 11.35 Tolerance mm : + 0.15 |
| control lever position degree : 105.0 tolerance degree : +- 4.0 | + |
| rack travel mm : 9.60 Rated speed rpm : 1195 Tolerance 1/min : +- 5 | BREAKAWAY Rack travel in mm: 9.60 |
| | Thank travel in like . 7.00 |

B24

Rated speed rpm : 1195 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : > 19.00 Del. quantity cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : +- 7.5 Check tolerance cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 325 8.60 rack travel mm : Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. 3.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 21.12.94 Test oil : ISO 4113 Combination No. : 0400463124 Injection pump Pump designation : PES3A80D410/3RS1324 EP type number : 0410483017 Governor Governer design. : RSV325...1150A8C494 : -4L : 0420232572 Governer no. Cust. part No. Customer-spec. information Customer : KHD Motor : F3L912 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1419992198 Inlet press. bar : 1.5 Test nozzle holde assembly : 0681343009 Opening pressure 173.5 Tolerance bar : +- 1.5 Test lines : 1680750014

6.0

2.0

| REMARKS | | | |
|--|-------------------------------------|--|--|
| (A) INJECTION PU Set equal delive per values | MP SETTING VALUES ery quant. | | |
| BEGINNING OF DEL | LIVERY | | |
| Prestroke mm Tolerance mm | : 1.95 : + 0.05 | | |
| test only | : ← 0.10 | | |
| Rack travel in m Tolerance mm | m: 10.50 : +- 1.50 | | |
| Firing order | : 1- 3- 2 | | |
| Phasing Tolerance Check tolerance *NW | : 0-120-240 : ← 0.50 : ← 0.75 | | |
| BEGINNING OF DELIVERY DIFFERENCE | | | |
| ime to cyl. no. | : 1 | | |
| ASIC SETTING | | | |
| tated speed rpm | : 1150 | | |
| ack travel in m olerance mm | m: 10.60 : +- 0.05 | | |
| el. quantity m3/1000 strokes | : 50.5 | | |
| olerance m3/1000 strokes | : ← 0.5 | | |
| heck tolerance m3/1000s. | : - 2.0 | | |
| preed | · | | |

Outside diameter :

x inside diameter:

| Tolerance cm3/1000 strokes : 2.5 | RATED SPEED |
|--|---|
| Check tolerance cm3/1000s. : 4.0 | RAILU SFEED |
| 2nd speed rpm : 325 | control lever position degree : 104.0 |
| Rack travel in mm: 8.70 | tolerance degree : +- 4.0 |
| Tolerance mm : \(\infty \) 0.10 Del. quantity cm3/1000 strokes : 12.0 | rack travel mm : 9.60 Rated speed rpm : 1195 Tolerance 1/min : +- 5 |
| Tolerance cm3/1000 strokes : +- 1.5 | rack travel mm : 4.00 |
| Check tolerance cm3/1000s. : +- 3.5 | Rated speed rpm : 1235 Tolerance 1/min : ← 15 |
| Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance | rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1410 |
| cm3/1000s. : 6.0 | rack travel mm : 4.00 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | Rated speed rpm : 1260 |
| ‡ | LOW IDLE |
| GUIDE SLEEVE POSITION | control lever position degree : 71.0 tolerance degree : +- 4.0 |
| control lever position degree : - 3 Rated speed rpm : 800 | Setting point w/out bumper spring |
| Rack travel in mm : 0.50 Tolerance mm : + 0.20 | Rated speed rpm : 325 rack travel mm : 8.20 |
| governor spring | Testing: |
| pre-tension click setting x : 5.00 | Rated speed rpm : 325 rack travel mm : 8.70 Tolerance mm : +- 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | rack travel mm : 2.00 Rated speed rpm : 490 |
| Rated speed rpm : 1150 Aneroid pressure | Tolerance 1/min : +- 30 |
| hPa : - Del. quantity cm3/1000 strokes : 50.5 | TORQUE CONTROL |
| Tolerance cm3/1000 strokes : +- 0.5 | Rated speed rpm : 1150 rack travel mm : 10.60 |
| Check tolerance cm3/1000s. : +- 2.0 Spreed | Tolerance mm : +- 0.05 |
| Tolerance cm3/1000 strokes : 2.5 | Rated speed rpm : 500 rack travel mm : 11.65 Tolerance mm : + 0.05 |
| Check tolerance cm3/1000s. : 4.0 | Rated speed rpm : 925 |
| † | rack travel mm : 11.10 |

Tolerance mm : ← 0.10

BREAKAWAY

Rack travel in mm : 9.60
Rated speed rpm : 1195
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 7.5 Check tolerance cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm 325 8.70 rack travel mm : Tolerance mm : **←** 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s. : +-3.5 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.12.94 Test oil : ISO 4113

Combination No. : 0400463129

Injection pump

Pump designation : PES3A80D410/3RS1324

EP type number : 0410483017

Governor

Governer design. : RSV325...1150A8C657L

Governer no. : 0420232326

Cust. part No. :

Customer—spec. information Customer : KHD Motor : F3L912

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +-- 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1680750014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Prestroke mm : 1.95 Tolerance mm : + 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1- 3- 2

Phasing : 0-120-240 Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 10.60 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 50.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.0

Spreed

CO1

| Tolerance cm3/1000 strokes : 2.5 | + control lever + position degree : 104.0 |
|--|---|
| Check tolerance cm3/1000s. : 4.0 | tolerance degree : +- 4.0 |
| 2nd speed rpm : 325 | rack travel mm : 9.60 Rated speed rpm : 1195 Tolerance 1/min : +- 5 |
| Rack travel in mm : 8.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.5 Tolerance | rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : +- 15 |
| cm3/1000 strokes : +- 1.5 Check tolerance cm3/1000s. : +- 3.5 Spreed | rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1350 |
| Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 6.0 | rack travel mm : 4.00 Rated speed rpm : 1240 |
| , | LOW IDLE |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 71.0 tolerance degree : + 4.0 |
| GUIDE SLEEVE POSITION | Setting point w/out bumper spring |
| control lever position degree : - 3 Rated speed rpm : 800 | Rated speed rpm : 325 rack travel mm : 8.30 Testing: |
| Rack travel in mm : 0.50 Tolerance mm : + 0.20 | Rated speed rpm : 325 rack travel mm : 8.80 Tolerance mm : + 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : - | rack travel mm : 2.00 Rated speed rpm : 690 Tolerance 1/min : +- 30 |
| Del. quantity cm3/1000 strokes : 50.5 | TORQUE CONTROL |
| Tolerance cm3/1000 strokes : +- 0.5 Check tolerance cm3/1000s. : +- 2.0 | + Rated speed rpm : 1150 + rack travel mm : 10.60 + Tolerance mm : + 0.05 |
| Spreed Tolerance cm3/1000 strokes : 2.5 | Rated speed rpm : 900 rack travel mm : 11.15 Tolerance mm : +- 0.15 |
| Check tolerance cm3/1000s. : 4.0 | Rated speed rpm : 500 rack travel mm : 11.65 |
| RATED SPEED | + Tolerance mm : +- 0.05 |

BREAKAWAY

Rack travel in mm : Rated speed rpm : Tolerance 1/min : 9.60

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 20.25 : +- 0.75 Tolerance mm Del. quantity cm3/1000 strokes :

120.0 Tolerance

7.5

cm3/1000 strokes

Check tolerance : + 10.0 cm3/1000s.

LOW IDLE

Rated speed rpm 325 8.80 rack travel mm Tolerance mm : **←** 0.10 Del. quantity cm3/1000 strokes : 12.5 Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000S.3.5 Spreed Tolerance

cm3/1000 strokes 4.0

Check tolerance

cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.12.94 Test oil : ISO 4113

Combination No. : 0400464119

Injection pump

Pump designation : PES4A75D410/3RS1255

EP type number : 0410474966

Governor

Governer design. : RSV325...1400A8C495L

Governer no. : 0420232302

Cust. part No. :

Customer-spec. information

Customer : KHD Motor : F4L912

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

bar : 173.5Tolerance bar : \leftarrow 1.5

Test Lines : 1680750014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Prestroke mm : 1.95 Tolerance mm : +- 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 10.20 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 44.0

Tolerance cm3/1000 strokes : +- 0.5

Check tolerance cm3/1000s. : +- 2.0

Spreed Tolerance

cm3/1000 strokes : 2.5

Check tolerance cm3/1000s. : 4.0

2nd speed rpm : 325

CO4

| Rack travel in mm: 9.00 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 11.0 Tolerance cm3/1000 strokes: + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed | rack travel mm : 9.20 Rated speed rpm : 1445 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.85 |
|---|--|
| Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 6.0 | Tolerance mm : +- 0.55 Rated speed rpm : 1700 |
| . 0.5 | rack travel mm : 4.00 Rated speed rpm : 1495 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | LOW IDLE |
| GUIDE SLEEVE POSITION | control lever position degree : 70.0 tolerance degree : +- 4.0 |
| control lever position degree : - 3 | Setting point w/out bumper spring |
| Rated speed rpm : 800 | Rated speed rpm : 325 rack travel mm : 8.50 |
| Rack travel in mm: 0.50 Tolerance mm: + 0.20 | Testing: |
| governor spring pre-tension click setting x : 5.50 | Rated speed rpm : 325 rack travel mm : 9.00 Tolerance mm : +- 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1400 | rack travel mm : 2.00 Rated speed rpm : 700 Tolerance 1/min : +- 30 |
| Aneroid pressure hPa : - | TORQUE CONTROL |
| Del. quantity cm3/1000 strokes : 44.0 Tolerance cm3/1000 strokes : + 0.5 | Rated speed rpm : 1400 rack travel mm : 10.20 Tolerance mm : + 0.05 |
| Check tolerance cm3/1000s. : +- 2.0 | Tolerance mm : +- 0.05 Rated speed rpm : 500 |
| Spreed | rack travel mm : 11.55 Tolerance mm : + 0.05 |
| cm3/1000 strokes : 2.5 Check tolerance | |
| cm3/1000s. : 4.0 | Rated speed rpm : 955 rack travel mm : 10.90 Tolerance mm : +- 0.10 |
| RATED SPEED | |
| control lever position degree : 119.0 tolerance degree : +- 4.0 | BREAKAWAY |

CO5

9.20 Rack travel in mm : Rated speed rpm : 1445 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 20.25 Tolerance mm : +- 0.75 Del. quantity

cm3/1000 strokes :

110.0 Tolerance

cm3/1000 strokes 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm 325 9.00 rack travel mm : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes :

11.0

Tolerance

cm3/1000 strokes 1.5

Check tolerance

cm3/1000s.3.5 : +-Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.12.94 : ISO 4113

Combination No.

: 0400464124

Injection pump

Pump designation : PES4A80D410/3RS1300

EP type number

: 0410484015

Governor

Governer design.

: RSV325...1150A8C298L

Governer no.

: 0420232308

Cust. part No. :

Customer-spec. information

Customer

: KHD

Motor

: F4L912

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C 2.0

Overflow valve

: 1419992198

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 0681343009

Opening pressure

173.5

Tolerance bar

Test lines : 1680750014

Outside diameter

6.0

x inside diameter :

2.0

x length mm

600

C07

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Prestroke mm

1.95

Tolerance mm

: + - 0.05

test only

: **←** 0.10

Rack travel in mm: 10.50 Tolerance mm

: +- 1.50

Firing order

: 1-3-4-2

Phasing

: 0-90-180-270

Tolerance Check

: +- 0.50

tolerance °NW

: +- 0.75

BASIC SETTING

Rated speed rpm

1150

Rack travel in mm:

10.50

Tolerance mm

: + - 0.05

Del. quantity

cm3/1000 strokes :

50.5

Tolerance

cm3/1000 strokes

0.5

Check tolerance cm3/1000s.

0.5

Spreed Tolerance

cm3/1000 strokes :

2.5

Check tolerance

cm3/1000s.

4.0

2nd speed rpm

325

| Rack travel in mm: 8.80 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 13.0 Tolerance cm3/1000 strokes: + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed Tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 6.0 | rack travel mm : 9.50 Rated speed rpm : 1195 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : + 15 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1420 rack travel mm : 4.00 Rated speed rpm : 1270 |
|---|---|
| WITH GOVERNOR + | LOW IDLE |
| | control lever |
| GUIDE SLEEVE POSITION | position degree : 73.0 tolerance degree : +- 4.0 |
| control lever position degree : -3 Rated speed rpm : 800 | Setting point w/out bumper spring Rated speed rpm : 325 |
| Rack travel in mm : 0.50 Tolerance mm : + 0.20 | rack travel mm : 5.50 Testing: |
| governor spring pre-tension click setting x : 5.50 | Rated speed rpm : 325 rack travel mm : 8.80 Tolerance mm : + 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | rack travel mm : 2.00 Tolerance 1/min : +- 30 |
| Rated speed rpm : 1150 Aneroid pressure hPa : - | TORQUE CONTROL |
| Del. quantity cm3/1000 strokes : 50.5 Tolerance cm3/1000 strokes : +- 0.5 | Rated speed rpm : 1150 rack travel mm : 10.50 Tolerance mm : + 0.05 |
| Check tolerance cm3/1000s. : +- 2.0 Spreed Tolerance | Rated speed rpm : 500 rack travel mm : 11.25 Tolerance mm : +- 0.05 |
| cm3/1000 strokes : 2.5 Check tolerance cm3/1000s. : 4.0 | Rated speed rpm : 880 rack travel mm : 10.90 Tolerance mm : + 0.10 |
| RATED SPEED | |
| control lever position degree : 108.0 tolerance degree : +- 4.0 | BREAKAWAY |

c08

Rack travel in mm : Rated speed rpm : 1195 Tolerance 1/min : +-

STARTING FUEL DELIVERY

*Rated speed rpm 100 rack travel mm 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 120.0

Tolerance cm3/1000 strokes : \leftarrow 7.5

Check tolerance

cm3/1000S. : **←** 10.0

LOW IDLE

Rated speed rpm 325 rack travel mm 8.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 13.0 Tolerance

cm3/1000 strokes 1.5 : +-

Check tolerance

cm3/1000s. 3.5 : +-Spreed

Tolerance

cm3/1000 strokes : 4.0 Check tolerance

cm3/1000s. 6.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 19.12.94 Test oil : ISO 4113 Combination No. : 0400866207 Injection pump Pump designation : PES6A100D320/3RS2691 EP type number : 9410230025 Governor Governer design. : RSV400...1100ADC2190 : -79R Governer no. : 0420233318 Cust. part No. : 3921 143 Customer-spec. information Customer : CDC Motor :60 8.3 : 129.0 Power KW TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413047 Inlet press. bar : 1.5 Test nozzle holde : 1688901101 assembly Opening pressure bar 208.5 Tolerance bar Test lines : 1680750014

```
x inside diameter :
                        2.0
 x length mm :
 REMARKS
 (A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values
BEGINNING OF DELIVERY
Prestroke mm
                       2.85
Tolerance mm
                 : + 0.05
test only
                 : +- 0.10
Rack travel in mm: 10.50
Firing order
                 : 1-5-3-6-2-
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : +- 0.50
Check
tolerance °NW
                 : +- 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
Rated speed rpm
                    1100
Rack travel in mm : 10.65
Tolerance mm
                : +- 0.05
Del. quantity
cm3/1000 strokes :
                     123.5
Tolerance
cm3/1000 strokes : +-
                       1.0
```

Outside diameter :

6.0

| Check tolerance cm3/1000s. : +- 3.0 | rack travel mm : 9.65 Rated speed rpm : 1145 Tolerance 1/min : +- 5 |
|--|--|
| Spreed | - rocerance minima. + |
| Tolerance cm3/1000 strokes : 3.5 | rack travel mm : 4.00 Rated speed rpm : 1205 Tolerance 1/min : +- 15 |
| Check tolerance cm3/1000s. : 8.0 | rack travel mm 0.85 |
| 2nd speed rpm : 400 | - Tolerance mm : +- 0.55 - Rated speed rpm : 1300 |
| Rack travel in mm: 5.60 | - - rack travel mm : 4.00 - Rated speed rpm : 1210 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | - LOW IDLE |
| 1 | - |
| GUIDE SLEEVE POSITION | control lever position degree : 79.0 tolerance degree : +- 4.0 |
| control lever position degree : - 3 | Setting point w/out bumper spring |
| Rated speed rpm : 800 | - Rated speed rpm : 400 - rack travel mm : 5.10 |
| Rack travel in mm: 0.50 Tolerance mm: + 0.20 | Testing: |
| governor spring pre-tension click setting x : 3.00 | Rated speed rpm : 400 rack travel mm : 5.60 Tolerance mm : +- 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | rack travel mm : 2.00 Rated speed rpm : 500 Tolerance 1/min : +- 30 |
| Rated speed rpm : 1100 + Ameroid pressure | Rated speed rpm : 100 |
| hPa : | CRT mm min. : > 19.50 |
| cm3/1000 strokes : 123.5 | |
| cm3/1000 strokes : + 1.0 Check tolerance | TORQUE CONTROL |
| cm3/1000s. : +- 3.0 Spreed | Rated speed rpm : 1100 rack travel mm : 10.65 |
| Tolerance cm3/1000 strokes : 3.5 | rack travel mm : 10.65 Tolerance mm : +- 0.05 |
| Check tolerance cm3/1000s. : 8.0 | |
| DATEN SPEEN | PDFS/ALIAN |
| RATED SPEED | BREAKAWAY |
| control lever position degree : 99.0 tolerance degree : +- 4.0 | Rack travel in mm : 9.65 Rated speed rpm : 1145 Tolerance 1/min : +- 5 |
| | |

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 : **←** 0.75 Tolerance mm

Del. quantity cm3/1000 strokes :

145.0

Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance cm3/1000s.

: +- 10.0

LOW IDLE

Rated speed rpm : 400 rack travel mm : 5.60

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 20.12.94 Edition Test oil : ISO 4113 Combination No. : 0401446150 Injection pump Pump designation : PE6R130/720RS1506 EP type number : 0411436002 Governor Governer design. : RQV250...1050R4K Governer no. : 0421415003 Cust. part No. : 865 020 PO2 Customer-spec. information Customer : PENTA Motor : TAMD163 P-A Power KW : 553.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 2417413078 Inlet press. bar Tolerance bar Test nozzle holde assembly : 1688901105 Opening pressure bar 208.5 Tolerance bar

: 1680750089

8.0

```
x inside diameter :
                        3.0
 x length mm :
                     600
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values
BEGINNING OF DELIVERY
Test pressure bar :
                       31.0
Tolerance bar
Prestroke mm
                       4.45
Tolerance mm
                 : +- 0.05
test only
                 : + - 0.10
Rack travel in mm: 10.50
                : +- 0.50
Tolerance mm
                 : 1-5- 3- 6- 2-
: 4
Firing order
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : + 0.30
Check
tolerance "NW
                 : + - 0.50
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
Rated speed rpm
                    1050
                     14.40
Rack travel in mm:
Tolerance mm
                     0.05
Del. quantity
cm3/1000 strokes :
                     450.0
```

Test lines

Outside diameter :

| Tolerance cm3/1000 strokes | | † |
|--|---------------------|--|
| Check tolerance | 2.0 | <pre>- control lever - position degree : - 1 - Rated speed rpm : 1205</pre> |
| cm3/1000s. | : ← 5.0 | Rack travel in mm : 11.00 |
| Spreed Tolerance | 47.0 | Tolerance mm : + 2.50 |
| cm3/1000 strokes Check tolerance | : 13.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000s. | : 17.0 | Rated speed rpm : 1050 Aneroid pressure |
| (B) SETTING OF INJECTION PUMP | | † hPa : 2200 † Del. quantity |
| WITH GOVERNOR | | + cm3/1000 strokes : 450.0 + Tolerance |
| GUIDE SLEEVE TRAV | /EL | cm3/1000 strokes : +- 2.0 + Check tolerance + cm3/1000s. : +- 5.0 |
| Rated speed rpm guide sleeve | | Spreed + Tolerance |
| travel mm Tolerance mm | : 1.26 : + 0.25 | + cm3/1000 strokes : 13.0 + Check tolerance |
| Rated speed rpm guide sleeve | : 1106 | + cm3/1000s. : 17.0 |
| travel mm Tolerance mm | : 9.18 : + 0.25 | RATED SPEED |
| Rated speed rpm | | t control lever |
| guide sleeve travel mm | : 6.42 | position degree : 65.0tolerance degree : + 4.0 |
| Tolerance mm Rated speed rpm | : ← 0.25 : 310 | control lever position degree : 119.0 |
| guide sleeve travel mm | : 2.00 | tolerance degree : + 4.0 |
| Tolerance mm | : +- 0.25 | rack travel mm : 13.40 Rated speed rpm : 1105 |
| Rated speed rpm guide sleeve travel mm | | + Tolerance 1/min : +- 5 |
| Tolerance mm | : 2.41 : +- 0.25 | + rack travel mm : 4.00 + Rated speed rpm : 1200 + Tolerance 1/min : +- 15 |
| Rated speed rpm guide sleeve | : 570 | rack travel mm : 0.50 |
| travel mm Tolerance mm | : 3.54 : + 0.25 | + Tolerance mm : + 0.50 + Rated speed rpm : 1300 |
| Rated speed rpm guide sleeve | : 1360 | LOW IDLE |
| travel mm Tolerance mm | : 13.50 : + 0.50 | + |
| CHINE CLEENE CASE | 7701 | control lever position degree : 74.0 |
| GUIDE SLEEVE POSIT | TOM | tolerance degree : +- 4.0 |
| | | t control lever position degree : 20.0 |

| tolerance degree | : ← 4.0 |
|---|--|
| Testing: | |
| Rated speed rpm rack travel mm Tolerance mm | : 250 : 6.65 : + 0.20 |
| Rated speed rpm | : 150 |
| CRT mm min. | : > 7.70 |
| CONTINUOUS-ACTION | CONTROL |
| Rated speed rpm | : 380 |
| TORQUE CONTROL | |
| Rated speed rpm rack travel mm Tolerance mm | : 850 : 13.20 : + 0.15 |
| Rated speed rpm rack travel mm Tolerance mm | : 975 : 14.30 : + 0.20 |
| ANEROID/ALTITUDE COMPENSATOR TEST | and the second seco |
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1050 : 2200 : 14.40 : +- 0.05 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 500 : 8.70 : ← 0.15 |
| Rated speed rpm | : 1050 |
| Pressure hPa rack travel mm Tolerance mm | : 1580 : 5.10 : + 0.10 |
| Pressure hPa rack travel mm Tolerance mm | : 410 : 0.25 : + 0.05 |
| | |

| Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 238.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 | Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance | : 2200 : 850 : 412.0 : + 4.0 : + 7.0 : 15.0 |
|---|---|--|
| BREAKAWAY | hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : 238.0 : + 2.0 |

Rack travel in mm : 13.40
Rated speed rpm : 1105
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 410.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : +- 25.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 20.12.94 Test oil : ISO 4113 Combination No. : 0401856700 Injection pump Pump designation : PE6P110A721RS3101 EP type number : 0411816725 Governor Governer design. : RQ300/1200PA412 Governer no. : 0421801172 Cust. part No. : Customer—spec. information Customer : SNF Motor : WD615.67 Power KW : 206.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C 40 Tolerance °C 2.0 Overflow valve : 1417413025 Inlet press. bar : 1.5 Test nozzle holde : 0681343009 assembly

: 1680750089

8.0

3.0

```
REMARKS
 (A) INJECTION PUMP SETTING VALUES
 Set equal delivery quant.
 per values
BEGINNING OF DELIVERY
Test pressure bar :
                       31.0
Tolerance bar : +- 1.0
Prestroke mm
                       2.85
Tolerance mm
                 : ← 0.05
test only
                 : +- 0.10
Rack travel in mm: 10.50
Tolerance mm
                 : +- 1.50
                 : 1-5- 3- 6- 2-
: 4
Firing order
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : + - 0.35
Check
tolerance °NW
                 : + 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. : 1
BASIC SETTING
Rated speed rpm
                    1200
Rack travel in mm :
                     12.05
                : +- 0.05
Tolerance mm
Del. quantity
                     163.0
cm3/1000 strokes :
Tolerance
cm3/1000 strokes : +- 1.0
```

x length mm : 600

bar

Opening pressure

Outside diameter :

x inside diameter:

Tolerance bar

Test lines

| Check tolerance cm3/10003. : +- | 4.0 | control lever position degree | • 40.0 |
|---|----------------|--|---------------------|
| Spreed | | tolerance degree | |
| Tolerance cm3/1000 strökes : | 4.0 | rack travel mm Rated speed rpm | : 11.00 |
| Check tolerance cm3/1000s. : | 7.5 | Tolerance 1/min | : 8 |
| Del. quantity cm3/1000 strokes : Tolerance | 15.0 | rack travel mm Rated speed rpm Tolerance 1/min | : 1340 |
| cm3/1000 strokes : +- Check tolerance | 3.0 | rack travel mm | |
| cm3/1000S. : +- Spreed Tolerance | 5.5 | Tolerance mm Rated speed rpm | : ← 0.75 : 1450 |
| cm3/1000 strokes : Check tolerance | 4.5 | LOW IDLE | |
| cm3/1000S. : (B) SETTING OF INJECTION WITH GOVERNOR | 7.5 IN PUMP | control lever position degree tolerance degree Testing: | |
| | 1 | resering. | |
| GUIDE SLEEVE POSITION | + | Rated speed rpm rack travel mm Tolerance mm | : 6.00 |
| control lever position degree : - 1 Rated speed rpm : | 600 | rack travel mm Rated speed rpm Tolerance 1/min | : 425 |
| Rack travel in mm : Tolerance mm : +- | | Rated speed rpm | : 100 |
| | | CRT mm min. | : > 7.50 |
| FULL LOAD DELIVERY AT FR | ULL LOAD STOP | | |
| | 200 ‡ | TORQUE CONTROL | |
| Aneroid pressure hPa : : | 700 ‡ | Dimension a mm | : 0.35 |
| Del. quantity cm3/1000 strokes : ' | 163.0 | Rated speed rpm rack travel mm | : 12.30 |
| Tolerance cm3/1000 strokes : +- | 10 | Tolerance mm | : +- 0.10 |
| Check tolerance | + | Rated speed rom | : 985 |
| cm3/1000s. : +- Spreed | 4.0 | Rated speed rpm rack travel mm Tolerance mm | : 12.50 : + 0.10 |
| Tolerance cm3/1000 strokes : | 4.0 | Rated enood nom | : 600 |
| Check tolerance cm3/1000s. | 7.5 | Rated speed rpm rack travel mm Tolerance mm | : 12.75 |
| RATED SPEED | + | Rated speed rpm rack travel mm Tolerance mm | : 12.05 |

| Rated speed rpm rack travel mm Tolerance mm | : 700 : 12.45 : +- 0.05 |
|--|---------------------------------------|
| ANEROID/ALTITUDE COMPENSATOR TEST | |
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 700 : 12.50 : + 0.10 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 500 : 10.20 : + 0.10 |
| Rated speed rpm | : 500 |
| Pressure hPa rack travel mm Tolerance mm | : 330 : 10.35 : + 0.15 |
| Pressure hPa rack travel mm Tolerance mm | : 420 : 11.55 : + 0.05 |
| FUEL DELIVERY CHA | RACTERISTICS |
| Aneroid pressure hPa Rated speed rpm Del. quantity | : 700 : 700 |
| cm3/1000 strokes Tolerance | : 167.0 |
| | |
| cm3/1000 strokes | : ← 2.0 |
| | : + 2.0 : + 4.0 |
| cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure | . – |
| cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm | . – |
| cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes | : +- 4.0 : - |
| cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity | : +- 4.0 : - : 700 |

Rack travel in mm : 11.00 Rated speed rpm : 1253 Tolerance $1/\min$: \leftarrow 8

STARTING FUEL DELIVERY

| Rated speed rpm rack travel mm | : | | 100 20.50 |
|-----------------------------------|---|----|--------------|
| Tolerance mm | - | + | 0.50 |
| Del. quantity cm3/1000 strokes | | | 220.0 |
| Tolerance | : | | 220.0 |
| cm3/1000 strokes | : | + | 15.0 |
| Check tolerance | | | 40.0 |
| cm3/1000S. | : | +- | 19.0 |

LOW IDLE

| Dol guantitu | | |
|--|------|------|
| Del. quantity cm3/1000 strokes Tolerance | : | 15.0 |
| cm3/1000 strokes Check tolerance | : +- | 3.0 |
| cm3/1000s. | : +- | 5.5 |
| Spreed Tolerance | | |
| cm3/1000 strokes | : | 4.5 |
| Check tolerance | | |
| cm3/1000s. | : | 7.5 |

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 16.12.94 Test oil : ISO 4113 Combination No. : 0401876804 Injection pump Pump designation : PE6P12DA32ORS3339 EP type number : 0411826812 Governor Governer design. : RSV325...1400P0A590 Governer no. : 0421833450 Cust. part No. : 3825199 : -P04 15.12.94 Customer-spec. information Customer : PENTA Motor : TAMD63 L Power KW : 228.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 2417413077 Inlet press. bar : 1.5 Tolerance bar Test nozzle holde assembly : 7688901101 Opening pressure

: 1680750008

6.0

```
x length mm :
                     600
 REMARKS
 (A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : +-
Prestroke mm
Tolerance mm
test only
                 : + 0.10
Rack travel in mm: 6.40
Tolerance mm
               : +- 0.50
Firing order
                 : 1-5-3-6-2-
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : + 0.30
Check
tolerance °NW
                 : ← 0.50
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
Rated speed rpm
                    1000
Rack travel in mm :
                      8.90
Tolerance mm
                : +- 0.05
Del. quantity
cm3/1000 strokes :
                     141.0
```

x inside diameter :

2.0

Tolerance bar

Outside diameter :

Test lines

| | 9 |
|---|---|
| Tolerance | 1 |
| cm3/1000 strokes : +- 1.0 | control lever |
| Check tolerance cm3/1000s. : +- 4.0 | position degree : 118.0 tolerance degree : + 4.0 |
| 11137 10000 | rack travel mm : 7.90 |
| Spreed | + Rated speed rpm : 1470 |
| Tolerance cm3/1000 strokes : 5.0 | + Tolerance 1/min : + 5 |
| Clib/ 1000 St: ORES . J.U | rack travel mm : 4.00 |
| Check tolerance | + Rated speed rpm : 1530 |
| cm3/1000s. : 9.0 | + Tolerance 1/min : + 15 |
| | rack travel mm : 0.85 |
| (B) SETTING OF INJECTION PUMP | + Tolerance mm : + 0.55 |
| WITH GOVERNOR | Rated speed rpm : 1630 |
| | |
| CUIDE OF TONE POCITION | LOW IDLE |
| GUIDE SLEEVE POSITION | İ |
| | + control lever |
| control lever | position degree : 82.0 |
| position degree : -3 Rated speed rpm : 800 | tolerance degree : +- 4.0 |
| . Ooo | T control lever |
| Rack travel in mm : 0.55 | position degree : 32.0 |
| Tolerance mm : + 0.25 | tolerance degree : +- 4.0 |
| governor spring | Setting point w/out bumper spring |
| pre-tension - | + |
| click setting $x : 5.00$ | Rated speed rpm : 325 rack travel mm : 3.70 |
| | + dek travet (iii) . 3.70 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | Testing: |
| Rated speed rpm : 1000 | Rated speed rpm : 325 |
| Aneroid pressure - 2000 | rack travel mm : 4.20 |
| hPa : 2000 - Del. quantity - | Tolerance mm : +- 0.20 |
| cm3/1000 strokes : 141.0 | rack travel mm : 2.00 |
| Tolerance | Rated speed rpm : 460 |
| cm3/1000 strokes : +- 1.0 Check tolerance | Tolerance 1/min : +- 30 |
| cm3/1000s. : + 4.0 | |
| Spreed | TORQUE CONTROL |
| Tolerance cm3/1000 strokes : 5.0 | Potest annual man |
| Check tolerance | - Rated speed rpm : 1400 - rack travel mm : 8.90 |
| cm3/1000s. : 9.0 | Tolerance mm : + 0.10 |
| | - |
| RATED SPEED | ANEROID/ALTITUDE |
| + | - COMPENSATOR TEST |
| control lever | |
| position degree : 68.0 | - SETTING |
| tolerance degree : + 4.0 | - |
| + | - Rated speed rpm : 500 |
| + | - Pressure hPa : 2000 |

| rack travel mm Tolerance mm | : 8.90 : ← 0.05 |
|---|---|
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | |
| Rated speed rpm | : 500 |
| Pressure hPa rack travel mm Tolerance mm | : 870 : 1.90 : +- 0.15 |
| Pressure hPa rack travel mm Tolerance mm | : 510 : 0.25 : ← 0.05 |
| FUEL DELIVERY CHA | ARACTERISTICS |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : 133.0 |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : - 500 : 93.0 : ← 1.0 : ← 4.0 |
| BREAKAWAY | |
| Rack travel in mm Rated speed rpm Tolerance 1/min | : 1470 |
| STARTING FUEL DEL | IVERY |
| Rated speed rpm rack travel mm Tolerance mm | : 100 : 12.00 : + 0.25 |

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402036747

Injection pump

Pump designation : PES6P110A120RS3296

EP type number : 0412016738

Governor

Governer design. : RQV400...1250PA1014

: -1K

Governer no. : 0421815291

Cust. part No. : 3921837

Customer—spec. information

Customer : CUMMINS Motor : 6BTA-A

Power KW : 130.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40

Tolerance °C : \leftarrow 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5

Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

S.o.d. blocking

Barrel no. : 1

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.23

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.05 Tolerance mm : + 0.05

CSS

| Del. quantity cm3/1000 strokes : | 145.0 | Rated speed rpm Tolerance 1/min | |
|--|-------------------|--|--|
| Tolerance cm3/1000 strokes : +- | 1.0 | rack travel mm Tolerance mm Rated speed rpm | : +- 0.50 |
| Check tolerance cm3/1000s. : +- | 3.0 | LOW IDLE | |
| Spreed Tolerance cm3/1000 strokes : | 4.0 | control lever position degree tolerance degree | : 15.0 : +- 4.0 |
| Check tolerance cm3/1000s. : | 7.5 | Testing: | |
| (B) SETTING OF INJECTION WITH GOVERNOR | ON PUMP | Rated speed rpm rack travel mm Tolerance mm | : 5.30 |
| | + | Rated speed rpm | : 275 |
| GUIDE SLEEVE POSITION | + | CRT mm min. | : > 7.00 |
| control lever position degree : - 1 | | CONTINUOUS—ACTION Rated speed rpm | |
| FULL LOAD DELIVERY AT F | ULL LOAD STOP | TORQUE CONTROL | |
| Aneroid pressure | + | Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm | : 13.05 : +- 0.05 : 800 : 11.10 |
| cm3/1000s. : +- Spreed | 3.0 | | |
| Tolerance cm3/1000 strokes : Check tolerance cm3/1000s. : | 4.0 | ANEROID/ALTITUDE COMPENSATOR TEST | |
| | | SETTING | |
| control lever position degree : tolerance degree : +- | | Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1250 : 1200 : 13.05 : +- 0.05 |
| rack travel mm : 13 Rated speed rpm : 13 Tolerance 1/min : +- rack travel mm : | 12.00 300 5 | Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 1250 : 8.50 : +- 0.20 |

C23

| Rated speed rpm | : 1250 |
|---|-----------------------------|
| Pressure hPa rack travel mm | : 565 : 11.80 |
| Tolerance mm | : +- 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 255 : 9.65 : + 0.05 |
| START CUT-OUT | |
| Rated speed rpm Check | : > 180 |
| speed 1/min Rated speed rpm | : > 80 : < 290 |
| Check speed 1/min | : < 300 |
| ENEL DEL TUEDY CHI | ADACTEDICTICO |
| FUEL DELIVERY CHA | ARACTERISTICS |
| Aneroid pressure hPa Rated speed rpm | : 1200 : 800 |
| Del. quantity cm3/1000 strokes | |
| Tolerance cm3/1000 strokes Check tolerance | : - 2.0 |
| cm3/1000s. Spreed | : +- 4.0 |
| Tolerance cm3/1000 strokes | : 8.0 |
| Check tolerance cm3/1000s. | : 12.0 |
| Aneroid pressure | |
| Rated speed rpm Del. quantity | : 500 |
| cm3/1000 strokes Tolerance | : 99.5 |
| cm3/1000 strokes Check tolerance | : +- 2.0 |
| cm3/1000s. | : +- 4.0 |
| BREAKAWAY | |
| Rack travel in mm Rated speed rpm Tolerance 1/min | : 12.00 : 1300 : +- 5 |
| STARTING FUEL DEL | IVERY |

| Rated speed rpm | : | | 100 |
|------------------|-----|--------------|-------|
| rack travel mm | : | | 11.40 |
| Tolerance mm | : ⊣ | - | 0.50 |
| Del. quantity | | | |
| cm3/1000 strokes | : | | 155.0 |
| Tolerance | | | |
| cm3/1000 strokes | : ⊣ | | 20.0 |
| Check tolerance | | | |
| cm3/1000s. | : 4 | | 25.0 |

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0402046789

Injection pump

Pump designation : PES6P120A320RS3139

EP type number : 0412026718

Governor

Governer design. : RQV275...1000PA728

: -3

: 0421813657 Governer no.

Cust. part No. : CCEP 5070 -116

Customer-spec. information

: RVI Customer

Motor : MIDR 062045 H

Power KW : 227.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : **←** 2.0

Overflow valve : 2417413071

Inlet press. bar : 2.5

Test nozzle holde

assembly : 1688901019

Opening pressure

bar 208.5 Tolerance bar : **←** 1.5

Lube oil : 1409918004

Test lines : 1680750075 Outside diameter : 8.0

x inside diameter :

1000 x length mm :

REMARKS

Start-of-delivery mark 9° cam angle after start of delivery cyl. 1.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +-

Prestroke mm 3.55 Tolerance mm

test only : + 0.10

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5- 3- 6- 2-

: 0-60-120-180-240 Phasing

: -300

: +- 0.30Tolerance

Check

tolerance °NW : + 0.50

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 11.15

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes :

195.0

Tolerance cm3/1000 strokes : +- 1.0

| Check tolerance cm3/1000s. : +- 4.0 | + rack travel mm : -10.65 + Tolerance mm : +- 0.50 + Rated speed rpm : 1300 |
|--|---|
| Spreed | T Kated speed rpm : 1500 |
| Tolerance cm3/1000 strokes : 5.0 | LOW IDLE |
| Check tolerance | Į |
| cm3/1000s. : 9.0 | control lever position degree : 67.0 tolerance degree : +- 4.0 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | Testing: |
| | Rated speed rpm : 275 |
| GUIDE SLEEVE POSITION | rack travel mm : -5.30 Tolerance mm : + 0.15 |
| control lever | Rated speed rpm : 200 |
| position degree : - 1 Rated speed rpm : 1170 | CRT mm max. : < -3.80 |
| Rack travel in mm : 16.50 Tolerance mm : +- 1.30 | CONTINUOUS-ACTION CONTROL |
| | Rated speed rpm : 370 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | TODOUT CONTROL |
| Rated speed rpm : 1000 | TORQUE CONTROL |
| Aneroid pressure hPa : 1000 | + Rated speed rpm : 600 |
| Del. quantity cm3/1000 strokes : 195.0 | + ANEROID/ALTITUDE |
| Tolerance cm3/1000 strokes : +- 1.0 | COMPENSATOR TEST |
| Check tolerance | Ţ |
| cm3/1000S. : +- 4.0 Spreed | + SETTING |
| Tolerance cm3/1000 strokes : 5.0 | Rated speed rpm : 500 |
| Check tolerance | + Pressure hPa : 1000 |
| cm3/1000s. : 9.0 | MEASUREMENT |
| RATED SPEED | Pressure hPa : - Rated speed rpm : 500 |
| 101125 01225 | + rack travel mm : -2.20 |
| control lever | Tolerance mm : +- 0.20 |
| position degree : 119.0 tolerance degree : +- 4.0 | Rated speed rpm : 500 |
| rack travel mm : -1.00 | + Pressure hPa : 160 + rack travel mm : -1.70 |
| Rated speed rpm : 1075 Tolerance 1/min : +- 5 | Tolerance mm : + 0.10 |
| rack travel mm : -7.15 | Pressure hPa : 280 |
| Rated speed rpm : 1190 Tolerance 1/min : +- 15 | rack travel mm : -0.75 Tolerance mm : +- 0.05 |

CS6

START CUT-OUT Rated speed rpm 100 : > Check speed 1/min : > 80 Rated speed rpm : < 195 Check speed 1/min 215 : < FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1000 Rated speed rpm 600 Del. quantity cm3/1000 strokes : 195.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 103.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. 4.0 **BREAKAWAY** Rack travel in mm : -1.00Rated speed rpm : 1075 Tolerance 1/min STARTING FUEL DELIVERY Rated speed rpm 100 Del. quantity cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : \leftarrow 10.0 Check tolerance cm3/1000S. : +- 14.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 21.12.94 : ISO 4113

Combination No. : 0402646780

Injection pump

Pump designation : PE6P120A320LS7872

EP type number

: 0412626912

Governor

Governer design. : RQ300/950PA1121

Governer no.

: 0421801701

Cust. part No. : 04221524KY016517

Customer-spec. information

Customer

: KHD

Motor

: BF6M1015/C

Power KW

: 300.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 1417413025

Inlet press. bar :

Tolerance bar

Test nozzle holde

assembly

: 1688901105

Opening pressure

bar

208.5

Tolerance bar

: **←** 1.5

Lube oil

: 1409918004

Test lines

: 1680750075

Outside diameter : 8.0

x inside diameter :

3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ___

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +-

Prestroke mm 4.05 Tolerance mm

test only : ← 0.10

Rack travel in mm: 10.50

Tolerance mm : **←** 1.50

Firing order : 1-6-3-5-2-

Phasing : 0-60-120-180-240

: -300 Tolerance

Check

: + - 0.30

tolerance *NW

: **←** 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

1

BASIC SETTING

Rated speed rpm :

950

Rack travel in mm: 14.50

Tolerance mm

: **←** 0.05

| Del. quantity cm3/1000 strokes | s : 362.0 | <pre>guide sleeve travel mm : 6.00 Tolerance mm : +- 0.10</pre> |
|---|---------------------|--|
| Tolerance cm3/1000 strokes | s : + 1.0 | Rated speed rpm : 1150 |
| Check tolerance cm3/1000s. | : +- 4.0 | guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50 |
| Spreed | | |
| Tolerance cm3/1000 strokes | 5.0 | GUIDE SLEEVE POSITION |
| Check tolerance cm3/1000s. | : 9.0 | control lever position degree : - 1 |
| 2nd speed rpm | : 300 | Rated speed rpm : 700 |
| Rack travel in m Tolerance mm Del. quantity | m: 4.80 :+- 0.20 | Rack travel in mm : 20.00 Tolerance mm : +- 0.80 |
| cm3/1000 strokes Tolerance | : 20.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes Check tolerance | | Rated speed rpm : 950 Aneroid pressure |
| cm3/1000s. Spreed | | + hPa : 1700 - Del. quantity |
| Tolerance cm3/1000 strokes | | - cm3/1000 strokes : 362.0 - Tolerance |
| Check tolerance cm3/1000s. | : 12.0 | - cm3/1000 strokes : +- 1.0 - Check tolerance |
| (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAN | | - cm3/1000s. : + 4.0 - Spreed - Tolerance - cm3/1000 strokes : 5.0 - Check tolerance - cm3/1000s. : 9.0 |
| Rated speed rpm | : 300 | RATED SPEED |
| guide sleeve travel mm | | T MATEU SPEED |
| Tolerance mm | : 2.23 : + 0.10 | control lever position degree : 101.0 |
| Rated speed rpm guide sleeve | | tolerance degree : +- 4.0 |
| travel mm Tolerance mm | : 6.36 : + 0.10 | rack travel mm : 13.50 Rated speed rpm : 995 |
| Rated speed rpm guide sleeve | : 950 | Tolerance 1/min : +- 5 rack travel mm : 4.00 |
| travel mm Tolerance mm | : 6.00 : + 0.10 | + rack travel mm : 4.00 + Rated speed rpm : 1070 + Tolerance 1/min : +- 15 |
| Rated speed rpm guide sleeve | : 385 | rack travel mm : 0.50 |
| travel mm Tolerance mm | : 5.22 : ← 0.10 | + Tolerance mm : +- 0.50 + Rated speed rpm : 1165 + |
| Rated speed rpm | : 450 | LOW IDLE |

D01

| FUEL DELIVERY CHARACTERISTICS rack travel mm | control lever position degree : 75.0 tolerance degree : + 4.0 | - Check - speed 1/min :> 80 - Rated speed rpm : < 220 - Check - speed 1/min : < 240 |
|---|---|---|
| Rated speed rpm : 950 | rack travel mm : 4.80 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 355 Tolerance 1/min : + 20 Rated speed rpm : 200 | Aneroid pressure hPa : - Rated speed rpm : 400 Del. quantity cm3/1000 strokes : 240.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 |
| STARTING FUEL DELIVERY STARTING FUEL DELIVERY | Rated speed rpm : 950 rack travel mm : 14.50 Tolerance mm : + 0.05 | Rack travel in mm: 13.50 Rated speed rpm: 995 |
| rack travel mm : 9.00 Tolerance mm : + 0.20 Rated speed rpm : 400 Rated speed rpm : 300 rack travel mm : 4.80 | COMPENSATOR TEST SETTING Rated speed rpm : 400 Pressure hPa : 1700 rack travel mm : 14.50 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : - | Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 200.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance |
| rack travel mm : 10.95 Tolerance mm : + 0.20 Pressure hPa : 1000 | rack travel mm : 9.00 Tolerance mm : + 0.20 Rated speed rpm : 400 Pressure hPa : 550 rack travel mm : 10.95 Tolerance mm : + 0.20 Pressure hPa : 1000 rack travel mm : 13.10 Tolerance mm : + 0.05 | Rated speed rpm : 300 rack travel mm : 4.80 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance |

DOS

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 20.12.94 Test oil : ISO 4113 Combination No. : 0402646947 Injection pump Pump designation : PE6P130A720RS7225 EP type number : 0412636817 Governor Governer design. : RQV300...950PA1002 : -1K Governer no. : 0421815280 Cust. part No. : Customer-spec. information Customer : IVECO-FRANCE Motor : 8210.42.400 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413025 Inlet press. bar : Tolerance bar : +-Test nozzle holde : 1688901105 assembly Opening pressure 208.5 bar Tolerance bar 1.5

: 1680750075

8.0

```
x inside diameter :
                        3.0
 x length mm : 1000
 REMARKS
 (A) INJECTION PUMP SETTING VALUES
 Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : +- 1.0
                       5.05
Prestroke mm
Tolerance mm
                 : +- 0.05
test only
                 : ← 0.10
Rack travel in mm : 14.00
Tolerance mm
                 : +- 0.50
Firing order
                 : 1-5-3-6-2-
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : +- 0.30
Check
tolerance °NW
                 : + - 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
                      1
S.o.d. blocking
Barrel no.
                      1
BASIC SETTING
Rated speed rpm :
                     900
Rack travel in mm :
                     13.80
Tolerance mm
                : ← 0.05
Del. quantity
cm3/1000 strokes :
                     314.0
```

Test Lines

Outside diameter :

| | 1. | Tolononeo | |
|---|-------------------|--|-------------------------------|
| Tolerance cm3/1000 strokes | : +- 1.0 | Tolerance cm3/1000 strokes Check tolerance | |
| Check tolerance cm3/1000s. | : +- 4.0 | cm3/1000s. | : 9.0 |
| Spreed | | RATED SPEED | |
| Tolerance cm3/1000 strokes | : 5.0 | control lever position degree | • 115 0 |
| Check tolerance cm3/1000s. | : 9.0 | tolerance degree | : + 4.0 |
| 2nd speed rpm | : 300 | rack travel mm Rated speed rpm | : 995 |
| Rack travel in mm Tolerance mm | | Tolerance 1/min rack travel mm | : 4.00 |
| Del. quantity cm3/1000 strokes Tolerance | : 22.0 | Rated speed rpm Tolerance 1/min | : 1120 : + 15 |
| cm3/1000 strokes : Check tolerance | + | rack travel mm Tolerance mm | |
| cm3/1000s. Spreed Tolerance | : +- 6.0 + | Rated speed rpm | |
| cm3/1000 strokes : Check tolerance | 8.0 | rack travel mm | : 4.00 |
| cm3/1000s. | : 12.0 | LOW IDLE | |
| (B) SETTING OF INJE WITH GOVERNOR | ECTION PUMP | control lever position degree tolerance degree | |
| GUIDE SLEEVE POSITI | ON | Testing: | |
| control lever | 1 | Rated speed rpm rack travel mm Tolerance mm | : 4.90 |
| position degree : Rated speed rpm : | 1240 | Rated speed rpm | : 100 |
| Rack travel in mm : Tolerance mm : | 8.00 +- 2.00 | CRT mm min. | : > 6.40 |
| FULL LOAD DELIVERY | AT FULL LOAD STOP | CONTINUOUS-ACTION | CONTROL |
| Rated speed rpm : | + | Rated speed rpm | : 400 |
| Aneroid pressure hPa : Del. quantity | 900 | TORQUE CONTROL | |
| cm3/1000 strokes : Tolerance cm3/1000 strokes : | + | Rated speed rpm rack travel mm Tolerance mm | : 900 : 13.80 · +- 0.05 |
| Check tolerance | + 4.0 | Rated speed rpm rack travel mm | : 700 |
| | + | Tolerance mm | : +- 0.10 |

| Rated speed rpm : 550 rack travel mm : 12.8 Tolerance mm : + 0.1 Rated speed rpm : 300 rack travel mm : 12.2 Tolerance mm : + 0.2 ANEROID/ALTITUDE COMPENSATOR TEST | Check tolerance cm3/1000s. : + 4.0 BREAKAWAY Rack travel in mm : 12.80 |
|--|--|
| SETTING | Rated speed rpm : 995 Tolerance 1/min : +- 5 |
| Rated speed rpm : 900 Pressure hPa : 900 rack travel mm : 13.8 Tolerance mm : + 0.0 MEASUREMENT Rated speed rpm : 900 Pressure hPa : 300 rack travel mm : 10.4 Tolerance mm : + 0.20 | Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0 |
| Pressure hPa : 580 rack travel mm : 12.70 Tolerance mm : +- 0.05 | Rated speed rpm : 300 |
| START CUT-OUT Rated speed rpm : > 100 Check speed 1/min : > 80 Check Check speed rpm : < 220 Check speed 1/min : < 240 Check check speed 1/min : < 240 Check check speed 1/min : < 240 Check ch | Tolerance cm3/1000 strokes : +- 3.0 check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance |
| | 7/4000 |
| FUEL DELIVERY CHARACTERISTIC Aneroid pressure hPa : 900 Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 289.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure | cm3/1000s. : 12.0 |

BOSCH INJ. PUMP TEST SPECIFICATIONS Test lines : 1680750089 Note remarks Outside diameter : 8.0 Refer to Service Info for test and x inside diameter : 3.0 adjustment instructions. x length mm : See microcard(s) W400/... Edition : 16.12.94 : ISO 4113 Test oil REMARKS Combination No. : 0402646971 Injection pump (A) INJECTION PUMP SETTING VALUES Pump designation : PE6P120A320RS7218 Set equal delivery quant. : -10z per values _____ EP type number : 0412626892 Governor BEGINNING OF DELIVERY Governer design. : RQV275...1000PA939 : -2 Test pressure bar : Governer no. : 0421813986 Tolerance bar : + 1.0 Cust. part No. : 1249337/5 Prestroke mm : + 0.05 Tolerance mm test only : **←** 0.10 Customer-spec. information Customer : DAF Rack travel in mm : 14.50 Motor : WS 242 L : +- 0.50 Tolerance mm Firing order : 1-5-3-6-2-TEST BENCH REQUIREMENTS Test oil inlet temp. °C Phasing : 0-60-120-180-240 Tolerance °C : -300 Tolerance : + - 0.30Check Overflow valve : 1417413025 : **←** 0.75 tolerance °NW Inlet press. bar : 1.5 BEGINNING OF DELIVERY DIFFERENCE Overflow quantity min. L/h 105 Tolerance L/h : **←** 10.0 Time to cyl. no. : 1 Test nozzle holde BASIC SETTING : 1688901105 assembly Rated speed rpm : 850 Opening pressure : 208.5 : + 1.5 bar Tolerance bar Rack travel in mm: 13.95

Tolerance mm

: +- 0.05

| Del. quantity cm3/1000 strokes : 210.0 | Spreed Tolerance cm3/1000 strokes : 5.0 |
|--|--|
| Tolerance cm3/1000 strokes : + 1.0 | Check tolerance cm3/1000s. : 9.0 |
| Check tolerance cm3/1000s. : + 4.0 | RATED SPEED |
| Spreed Tolerance cm3/1000 strokes : 5.0 | control lever position degree : 119.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. : 9.0 | rack travel mm : 12.95 |
| 2nd speed rpm : 275 | Rated speed rpm : 1042 Tolerance 1/min : +- 5 |
| Rack travel in mm: 6.10 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 17.0 | rack travel mm : 4.00 Rated speed rpm : 1160 Tolerance 1/min : +- 15 |
| Tolerance : + 3.0 | rack travel mm : 0.70 Tolerance mm : + 0.70 Rated speed rpm : 1250 |
| Spreed Tolerance | LOW IDLE |
| cm3/1000 strokes : 8.0 Check tolerance | LOW IVEE |
| cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP | control lever position degree : 82.0 tolerance degree : +- 4.0 |
| WITH GOVERNOR | Testing: |
| GUIDE SLEEVE POSITION | Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : +- 0.10 |
| control lever | Rated speed rpm : 175 |
| position degree : -1 Rated speed rpm : 1130 | CRT mm min. : > 7.50 |
| Rack travel in mm : 13.90 Tolerance mm : +- 1.30 | CONTINUOUS-ACTION CONTROL |
| | Rated speed rpm : 325 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | TORQUE CONTROL |
| Rated speed rpm : 850 Aneroid pressure hPa : 1000 Del. quantity | Rated speed rpm : 850 rack travel mm : 13.95 Tolerance mm : +- 0.05 |
| cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 | Rated speed rpm : 1000 rack travel mm : 13.95 Tolerance mm : +- 0.10 |
| | |

| Rated speed rpm : 600 Pressure hPa : 1000 rack travel mm : 13.95 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 600 rack travel mm : 12.00 Tolerance mm : + 0.10 Rated speed rpm : 600 Pressure hPa : 420 rack travel mm : 13.35 Tolerance mm : + 0.05 Pressure hPa : 300 rack travel mm : 12.55 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS |
|--|
| Pressure hPa : 1000 rack travel mm : 13.95 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : |
| Pressure hPa : Rated speed rpm : 600 rack travel mm : 12.00 Tolerance mm : + 0.10 Rated speed rpm : 600 Pressure hPa : 420 rack travel mm : 13.35 Tolerance mm : + 0.05 Pressure hPa : 300 rack travel mm : 12.55 Tolerance mm : + 0.10 |
| Rated speed rpm : 600 rack travel mm : 12.00 Tolerance mm : + 0.10 Rated speed rpm : 600 Pressure hPa : 420 rack travel mm : 13.35 Tolerance mm : + 0.05 Pressure hPa : 300 rack travel mm : 12.55 Tolerance mm : + 0.10 |
| Pressure hPa : 420 rack travel mm : 13.35 Tolerance mm : + 0.05 Pressure hPa : 300 rack travel mm : 12.55 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS |
| rack travel mm : 13.35 Tolerance mm : + 0.05 Pressure hPa : 300 rack travel mm : 12.55 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS |
| rack travel mm : 12.55 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS |
| |
| Approid proceurs |
| Aneroid pressure hPa : - Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 |
| BREAKAWAY |
| Rack travel in mm : 12.95 Rated speed rpm : 1042 Tolerance 1/min : +- 5 |

LOW IDLE

009

Rated speed rpm

275

| rack travel mm Tolerance mm | : | 6.10 0.10 |
|-------------------------------------|------|--------------|
| Del. quantity | • | |
| cm3/1000 strokes Tolerance | : | 17.0 |
| cm3/1000 strokes Check tolerance | : +- | 3.0 |
| cm3/1000s. | : +- | 6.0 |
| Spreed Tolerance | | |
| cm3/1000 strokes Check tolerance | : | 8.0 |
| cm3/1000s. | : | 12.0 |

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 : ISO 4113 Test oil

Combination No. : 0402646973

Injection pump

Pump designation : PE6P12DA32ORS7218

: -107

EP type number : 0412626892

Governor

Governer design. : RQ275/1000PA936-2

Governer no. : 0421801633

Cust. part No. : 1249172/5

Customer-spec. information

Customer : DAF

: WS 242 L Motor

Power KW : 242.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar : +-

Overflow quantity

min. l/h 110 min. l/h : 110 Tolerance l/h : +- 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm Tolerance mm

test only : +- 0.10

Rack travel in mm: 14.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : + - 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 13.95 Tolerance mm : +- 0.05

D10

| | | + Rated speed rpm : 450 |
|--|---------------------|--|
| Del. quantity | 610.0 | + guide sleeve |
| cm3/1000 strokes | 3 : 210.0 | travel mm : 6.00 Tolerance mm : +- 0.10 |
| Tolerance cm3/1000 strokes | s : 1.0 | + Rated speed rpm : 1220 + guide sleeve |
| Check tolerance cm3/1000s. | : +- 4.0 | travel mm : 11.50 Tolerance mm : + 0.50 |
| Spreed | | |
| Tolerance cm3/1000 strokes | 5 : 5.0 | + GUIDE SLEEVE POSITION |
| Check tolerance cm3/1000s. | : 9.0 | control lever position degree : - 1 |
| 2nd speed rpm | | Rated speed rpm : 550 |
| • | | Rack travel in mm : 16.00 |
| Rack travel in m Tolerance mm | m: 6.10 : + 0.10 | + Tolerance mm : +- 0.60 |
| Del. quantity cm3/1000 strokes Tolerance | : 17.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes Check tolerance | : +- 3.0 | Rated speed rpm : 850 Aneroid pressure |
| cm3/1000s. Spreed | : +- 6.0 | + hPa : 1000 |
| Tolerance | | + Del. quantity + cm3/1000 strokes : 210.0 |
| cm3/1000 strokes Check tolerance | : 8.0 | + Tolerance + cm3/1000 strokes : +- 1.0 |
| cm3/1000s. | : 12.0 | Check tolerance + cm3/1000s. : + 4.0 |
| (D) SETTING OF TH | NICCTION DUMP | + Spreed |
| (B) SETTING OF IN WITH GOVERNOR | ADECTION POMP | Tolerance cm3/1000 strokes : 5.0 |
| | | + Check tolerance + cm3/1000s. : 9.0 |
| GUIDE SLEEVE TRAV | VEL | † |
| Rated speed rpm guide steeve | : 275 | RATED SPEED |
| travel mm | : 1.64 | + |
| Toterance mm | : + 0.10 | tontrol lever position degree : 109.0 |
| Rated speed rpm guide sleeve | | tolerance degree : +- 4.0 |
| travel mm Tolerance mm | : 6.43 : + 0.10 | rack travel mm : 12.95 Rated speed rpm : 1042 Tolerance 1/min : +- 8 |
| Rated speed rpm | : 1000 | + |
| guide sleeve | : 6.00 | rack travel mm : 4.00 Rated speed rpm : 1135 |
| travel mm Tolerance mm | : + 0.10 | Tolerance 1/min : + 15 |
| Rated speed rpm guide sleeve | | rack travel mm : 0.70 |
| travel mm Tolerance mm | : 4.13 | Tolerance mm : +- 0.70 Rated speed rpm : 1250 |
| iolerance mm | : +- 0.10 | ‡ |
| | | · |

| LOW IDLE | |
|---|---|
| control lever position degree tolerance degree | : 73.0 : + 4.0 |
| Testing: | |
| Rated speed rpm rack travel mm Tolerance mm | : 275 : 5.00 : +- 0.10 |
| rack travel mm Rated speed rpm Tolerance 1/min | : 350 |
| Rated speed rpm | : 175 |
| CRT mm min. | : > 6.50 |
| TORQUE CONTROL | |
| Rated speed rpm rack travel mm Tolerance mm | : 850 : 13.95 : ← 0.05 |
| Rated speed rpm rack travel mm Tolerance mm | : 1000 : 13.95 : ← 0.10 |
| ANEROID/ALTITUDE COMPENSATOR TEST | |
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 600 : 1000 : 13.95 : +- 0.05 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 600 : 12.00 : +- 0.10 |
| Rated speed rpm | : 600 |
| Pressure hPa rack travel mm Tolerance mm | : 420 : 13.35 : + 0.05 |
| Pressure hPa | : 300 |
| | |

| rack travel mm Tolerance mm | : 12.55 : +- 0.10 |
|--|--|
| FUEL DELIVERY CHA | ARACTERISTICS |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | |
| BREAKAWAY | |
| Rack travel in mm Rated speed rpm Tolerance 1/min | : 1042 |
| LOW IDLE | |
| Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : 275 : 6.10 : + 0.10 : 17.0 : + 3.0 : + 6.0 : 8.0 : 12.0 |

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 16.12.94 : ISO 4113 Test oil Combination No. : 0402646988 Injection pump Pump designation : PE6P120A320RS7230 : -10x EP type number : D412626899 Governor Governer design. : RQV250...1000PA990K Governer no. : 0421815274 Cust. part No. : 1250705/4 Customer-spec. information Customer : DAF : WS 295 L Motor Power KW : 295.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1417413025 Inlet press. bar : Tolerance bar Test nozzle holde assembly : 1688901105 Opening pressure 208.5 Tolerance bar

: 1680750089

8.0

Test Lines

013

Outside diameter :

```
x inside diameter :
                        3.0
 x Length mm :
 REMARKS
 (A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ___
BEGINNING OF DELIVERY
Test pressure bar :
Test pressure bar : 31.0
Tolerance bar : +- 1.0
                       5.05
Prestroke mm
Tolerance mm
test only
                 : + 0.10
Rack travel in mm: 10.50
Tolerance mm : +- 1.50
Firing order
                 : 1-5-3-6-2-
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : +- 0.30
Check
tolerance °NW
                 : + 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. : 1
BASIC SETTING
                     980
Rated speed rpm
Rack travel in mm :
                     13.95
Tolerance mm
                 : +- 0.05
Del. quantity
cm3/1000 strokes :
                     259.0
```

| Tolerance cm3/1000 strokes | : 1.0 | + Rated speed rpm : 390 + guide sleeve |
|---|-----------------------------|--|
| Check tolerance cm3/1000s. | : +- 4.0 | travel mm : 3.79 Tolerance mm : + 0.25 |
| Spreed Tolerance cm3/1000 strokes | : 5.0 | Rated speed rpm : 1310 guide sleeve travel mm : 13.50 |
| Check tolerance cm3/1000s. | : 9.0 | + Tolerance mm : +- 0.50 |
| 2nd speed rpm | : 250 | GUIDE SLEEVE POSITION |
| Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance | : + 0.10 | control lever position degree : - 1 Rated speed rpm : 1130 Rack travel in mm : 13.50 |
| cm3/1000 strokes Check tolerance | | + Tolerance mm : +- 1.30 |
| cm3/1000s. Spreed Tolerance | : 6.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes Check tolerance cm3/1000s. | : 8.0 : 12.0 | Rated speed rpm : 980 Aneroid pressure |
| (B) SETTING OF IN | | hPa : 1500 Del. quantity cm3/1000 strokes : 259.0 |
| WITH GOVERNOR | SECTION FOR | Tolerance : +- 1.0 Check tolerance |
| GUIDE SLEEVE TRAV | EL | + cm3/1000S. : +- 4.0 + Spreed + Tolerance |
| Rated speed rpm guide sleeve travel mm | : 250 : 1.53 | - cm3/1000 strokes : 5.0 - Check tolerance - cm3/1000s. : 9.0 |
| Tolerance mm Rated speed rpm | : +- 0.10 : 1038 | RATED SPEED |
| guide sleeve travel mm Tolerance mm | : 9.74 : +- 0.10 | control lever |
| Rated speed rpm guide sleeve | : 686 | position degree : 120.0 tolerance degree : +- 4.0 |
| travel mm Tolerance mm | : 6.41 : + 0.25 | rack travel mm : 12.95 Rated speed rpm : 1032 |
| Rated speed rpm guide sleeve | : 284 | Tolerance 1/min : +- 5 + rack travel mm : 4.00 |
| travel mm Tolerance mm | : 2.27 : +- 0.25 | Rated speed rpm : 1150 Tolerance 1/min : +- 15 |
| | | |
| Rated speed rpm guide sleeve travel mm Tolerance mm | : 334 : 3.17 : + 0.25 | rack travel mm : 0.70 Tolerance mm : +- 0.70 Rated speed rpm : 1275 |

| | | 1 |
|---|--|--|
| OW IDLE | | Rated speed rpm : 980 |
| ontrol lever | | Pressure hPa : 730 rack travel mm : 12.65 Tolerance mm : + 0.05 |
| osition degree olerance degree | : 70.0 : +- 4.0 | Pressure hPa · 300 |
| sting: | | rack travel mm : 9.80 Tolerance mm : + 0.10 |
| ted speed rpm ck travel mm erance mm | : 250 : 5.20 | <u> </u> |
| olerance mm | : +- 0.10 | FUEL DELIVERY CHARACTERISTICS |
| ack travel mm ated speed rpm olerance 1/min | : 350 | Aneroid pressure hPa : 1500 Rated speed rpm : 600 |
| ated speed rpm | : 150 | + Del. quantity + cm3/1000 strokes : 257.0 |
| RT mm min. | : > 7.00 | + Tolerance + cm3/1000 strokes : ← 2.0 + Check tolerance |
| DRQUE CONTROL | | |
| ted speed rpm ck travel mm | : 980 : 13.95 | Tolerance cm3/1000 strokes : 8.0 Check tolerance |
| erance mm | : ← 0.05 | |
| ated speed rpm ack travel mm blerance mm | : 12.35 | Aneroid pressure hPa : - Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 165.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance |
| ated speed rpm | : 825 | Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 165.0 |
| ack travel mm olerance mm | : 13.40 : ← 0.10 | Tolerance cm3/1000 strokes : +- 1.0 |
| ated speed rpm ack travel mm | : 400 : 12.20 | - Check tolerance - cm3/1000s. : +- 4.0 |
| olerance mm | : + 0.10 | BREAKAWAY |
| NEROID/ALTITUDE | ************************************** | + |
| MPENSATOR TEST | | Rack travel in mm: 12.95 Rated speed rpm: 1032 |
| TTING | | + Tolerance 1/min : +- 5 |
| ted speed rpm essure hPa ck travel mm Lerance mm | : 980 : 1500 : 13.95 : ← 0.05 | † † |
| ISUREMENT | , + ζω, υ | LOW IDLE |
| ressure hPa | | Rated speed rpm : 250 rack travel mm : 6.10 |
| ated speed rpm ack travel mm olerance mm | : 980 : 8.90 : + 0.10 | Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 17.0 |

D15

| Tolerance | | |
|------------------|------|------|
| cm3/1000 strokes | : +- | 3.0 |
| Check tolerance | | |
| cm3/1000s. | : +- | 6.0 |
| Spreed | | |
| Tolerance | | |
| cm3/1000 strokes | : | 8.0 |
| Check tolerance | | |
| rm3/1000s | • | 12 N |

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 12.12.94 Test oil : ISO 4113 Combination No. : 0402646992 Injection pump Pump designation : PE6P120A720RS7021 EP type number : 0412626869 Governor Governer design. : RQ200/1000PA1036 Governer no. : 0421801649 Cust. part No. : 1363610 Customer-spec. information Customer : SCANIA Motor : DSI11E01 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413025 Inlet press. bar : Tolerance bar Test nozzle holde assembly : 1688901104 Opening pressure bar Tolerance bar Test lines : 1680750008 Outside diameter 6.0 x inside diameter: 2.0

017

| x length mm : 600 |
|---|
| REMARKS Check and set without ROBO diaphragam |
| (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| BEGINNING OF DELIVERY |
| Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Prestroke mm : 5.05 Tolerance mm : + 0.05 |
| test only $: \leftarrow 0.10$ |
| Rack travel in mm : 10.50 Tolerance mm : + 1.50 |
| Firing order : 1-5-3-6-2- : 4 |
| Phasing : 0-60-120-180-240 : -300 : + 0.30 Check tolerance °NW : + 0.75 |
| BEGINNING OF DELIVERY DIFFERENCE |
| Time to cyl. no. : 1 |
| BASIC SETTING |
| Rated speed rpm : 700 |
| Rack travel in mm : 13.45 Tolerance mm : + 0.05 |
| Del. quantity cm3/1000 strokes : 258.0 |
| |

| Tolerance cm3/1000 strokes | : ← 1.0 [‡] | Rated speed rpm : 1460 guide sleeve |
|--|----------------------|---|
| Check tolerance cm3/1000s. | : + 4.0 | travel mm : 11.50 Tolerance mm : +- 0.50 |
| Spreed Tolerance cm3/1000 strokes | : 8.0 | GUIDE SLEEVE POSITION |
| Check tolerance cm3/1000s. | : 12.0 | Rated speed rpm : 600 Rack travel in mm : 16.50 |
| 2nd speed rpm | + | Tolerance mm : +- 1.30 |
| | 1 | |
| Rack travel in mm Tolerance mm | | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Del. quantity cm3/1000 strokes Tolerance | : 31.0 | Rated speed rpm : 700 Aneroid pressure hPa : - |
| cm3/1000 strokes Check tolerance | : + 3.0 | Del. quantity cm3/1000 strokes : 258.0 |
| cm3/1000s. Spreed | : +- 6.0 | Tolerance cm3/1000 strokes : +- 1.0 |
| Tolerance cm3/1000 strokes | : 4.0 | Check tolerance cm3/1000S. : +- 4.0 |
| Check tolerance cm3/1000s. | : 8.0 | Spreed Tolerance |
| (B) SETTING OF IN. WITH GOVERNOR | JECTION PUMP | cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 |
| GUIDE SLEEVE TRAVE | ‡ | RATED SPEED |
| Rated speed rpm guide sleeve travel mm | : 250 : 1.08 | <pre>control lever position degree : 43.0 tolerance degree : +- 4.0</pre> |
| Tolerance mm | : + 0.10 | control lever |
| Rated speed rpm guide sleeve travel mm | : 1054 + | position degree : 98.0 tolerance degree : +- 4.0 |
| Tolerance mm | : + 0.10 | rack travel mm : 12.40 Rated speed rpm : 1045 |
| Rated speed rpm guide sleeve | : 1000 | Tolerance 1/min : +- 5 |
| travel mm Tolerance mm | : 4.00 : + 0.10 | rack travel mm : 4.00 Rated speed rpm : 1200 |
| Rated speed rpm | : 353 | Tolerance 1/min : + 15 |
| guide sleeve travel mm Tolerance mm | : 3.46 : +- 0.10 | rack travel mm : 0.50 Tolerance mm : +- 0.50 Pated speed rpm : 1300 |
| | : 420 | Rated speed rpm : 1300 |
| guide sleeve travel mm | : 4.00 | LOW IDLE |
| | : + 0.10 | |

D18

| control lever position degree tolerance degree | : 66.0 : ← 4.0 | Aneroid pressure hPa : - Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 227.0 |
|---|--|---|
| control lever position degree tolerance degree | : 11.0 : + 4.0 | + Tolerance + cm3/1000 strokes : +- 4.0 |
| Testing: | | - Check tolerance - cm3/1000s. : +- 6.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 250 : 6.30 : ← 0.10 | Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 268.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 |
| rack travel mm Rated speed rpm Tolerance 1/min | : 350 : +- 30 | Tolerance - cm3/1000 strokes : +- 1.0 - check tolerance - cm3/1000s. : +- 4.0 |
| Rated speed rpm | : 150 | |
| CRT mm min. | : > 8.50 | BREAKAWAY |
| TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm | : 1000 : 13.45 : + 0.05 | Rack travel in mm : 12.40 Rated speed rpm : 1045 Tolerance 1/min : +- 5 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 12.90 Tolerance mm : + 0.20 |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 1500 : 13.45 : + 0.05 | Rated speed rpm : 100 rack travel mm : 12.90 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000S. : + 24.0 |
| MEASUREMENT | | <u></u> |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 500 : 12.90 : ← 0.20 | LOW IDLE Rated speed rpm : 250 |
| Rated speed rpm | : 500 | rack travel mm : 6.30 Tolerance mm : +- 0.30 |
| Pressure hPa rack travel mm Tolerance mm | : 235 : 13.25 : +- 0.05 | Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance |
| | | + cneck toterance + cm3/1000s. : +- 6.0 + Spreed |
| FUEL DELIVERY CHAR | ACTERISTICS | Tolerance cm3/1000 strokes : 4.0 |

Check tolerance cm3/1000s.

: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

₹ ₹2.12.94 Edition : 1so 4113 Test oil

Combination No. : 0402648836

Injection pump

Pump designation : PE8P120A720LS7125

: -10T

EP type number : 0412628890

Governor

Governer design. : RQV200...950PA736-4

Governer no. : 0421813646

Cust. part No. : 397963

Customer-spec. information

: SCANIA Customer

Motor : DSC14 03 L09,L10

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar :

Test nozzle holde

: 1688901019 assembly

Opening pressure

bar 208.5 Tolerance bar

Test lines : 1680750015

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 5.05 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

: 0-45-90-135-180 : -225-270-315 Phasing

Tolerance : + 0.30

Check

tolerance °NW : + - 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 700

Rack travel in mm : 13.85 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 222.0

| Tolerance | 1 | |
|---|----------------------|--|
| cm3/1000 strokes | : : +- 1.0 | RATED SPEED |
| Check tolerance cm3/1000s. | : + 4.0 | NATED STEED |
| Spreed | | control lever |
| Tolerance cm3/1000 strokes | : 6.0 | position degree : 60.0 tolerance degree : +- 4.0 |
| Check tolerance | | control lever position degree : 115.0 |
| cm3/1000s. | : 9.0 | tolerance degree : + 4.0 |
| Del. quantity cm3/1000 strokes Tolerance | 1 | rack travel mm : 12.80 Rated speed rpm : 995 Tolerance 1/min : +- 5 |
| cm3/1000 strokes Check tolerance | : + 2.0 | - |
| cm3/1000s. Spreed | : ← 4.0 | rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : +- 15 |
| Tolerance cm3/1000 strokes | : 3.0 | rack travel mm : 0.50 |
| Check tolerance cm3/1000s. | : 6.0 | Tolerance mm : +- 0.50 Rated speed rpm : 1250 |
| (B) SETTING OF IN | NJECTION PUMP | LOW IDLE |
| | Ţ | control lever |
| GUIDE SLEEVE POST | ITION | position degree : 65.0 tolerance degree : +- 4.0 |
| control lever position degree Rated speed rpm | | control lever position degree : 11.0 tolerance degree : +- 4.0 |
| Rack travel in mm | + | Testing: |
| Tolerance mm | : + 1.30 | Rated speed rpm : 225 rack travel mm : 5.00 Tolerance mm : +- 0.10 |
| FULL LOAD DELIVER | RY AT FULL LOAD STOP | rack travel mm : 2.00 |
| Rated speed rpm Aneroid pressure hPa | : 700 | Rated speed rpm : 390 Tolerance 1/min : +- 30 |
| Del. quantity | 1 | Rated speed rpm : 100 |
| cm3/1000 strokes Tolerance cm3/1000 strokes | <u> </u> | CRT mm min. ; > 6.50 |
| Check tolerance cm3/1000s. | : +- 4.0 | TORQUE CONTROL |
| Spreed Tolerance | + | |
| cm3/1000 strokes Check tolerance | : 6.0 | Rated speed rpm : 950 rack travel mm : 13.85 Tolerance mm : +- 0.05 |
| cm3/1000s. | : 9.0 I | Total ariot likii . Total |

| ANEROID/ALTITUDE COMPENSATOR TEST | | | | |
|--|---|--|--|--|
| SETTING | | | | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 900 : 13.85 : +- 0.05 | | | |
| MEASUREMENT | | | | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 500 : 10.80 : + 0.20 | | | |
| Rated speed rpm | : 500 | | | |
| Pressure hPa rack travel mm Tolerance mm | : 325 : 11.50 : ← 0.20 | | | |
| Pressure hPa rack travel mm Tolerance mm | : 445 : 12.95 : + 0.05 | | | |
| | | | | |
| FUEL DELIVERY CHA | ARACTERISTICS | | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity | : 900 : 950 | | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes | : 900 : 950 | | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes | : 900 : 950 | | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance | : 900 : 950 : 215.0 | | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa | : 900 : 950 : 215.0 : +- 4.0 : +- 6.0 | | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Aneroid pressure hPa Rated speed rpm Del. quantity | : 900 : 950 : 215.0 : ← 4.0 : ← 6.0 | | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance | : 900 : 950 : 215.0 : ← 4.0 : ← 6.0 : - 500 : 140.0 | | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance | : 900 : 950 : 215.0 : ← 4.0 : ← 6.0 : - 500 : 140.0 | | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes | : 900 : 950 : 215.0 : ← 4.0 : ← 6.0 : - 500 : 140.0 | | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance | 900 950 215.0 +- 4.0 +- 6.0 500 140.0 +- 2.0 | | | |

Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : +- 24.0 LOW IDLE Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 : +-Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

Rated speed rpm :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 12.12.94 : ISO 4113

Combination No. : 0402648839

Injection pump

Pump designation : PE8P120A720LS7125

: -10T

EP type number : 0412628890

Governor

Governer design. : RQV200...950PA736-1

Governer no.

: 0421813551

Cust. part No. : 380804

Customer-spec. information : SCANIA Customer

Motor

: DSC14 03

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1688901019

Opening pressure

bar

208.5

Tolerance bar

Test lines

: 1680750015

Outside diameter :

6.0

x inside diameter :

1.5

D24

x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 5.05 Tolerance mm : + - 0.05

test only : + - 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-2-7-3-4 Firing order

: - 5- 6- 8

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm

700

Rack travel in mm: 13.85

Tolerance mm : **←** 0.05

Del. quantity cm3/1000 strokes :

222.0

| Tolerance + | |
|---|--|
| cm3/1000 strokes : +- 1.0 Check tolerance | RATED SPEED |
| cm3/1000s. : +- 4.0 | control lever |
| Spreed Tolerance cm3/1000 strokes : 6.0 | position degree : 60.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. : 9.0 | control lever position degree : 95.0 tolerance degree : +- 4.0 |
| Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes : + 2.0 | rack travel mm : 12.80 Rated speed rpm : 995 Tolerance 1/min : +- 5 |
| Check tolerance cm3/1000s. : +- 4.0 Spreed | rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : +- 15 |
| Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0 | rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1250 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | LOW IDLE |
| GUIDE SLEEVE POSITION | control lever position degree : 44.0 tolerance degree : +- 4.0 |
| control lever position degree : -1 Rated speed rpm : 1040 | <pre>control lever position degree : 10.0 tolerance degree : +- 4.0</pre> |
| Rack travel in mm : 16.50 | Testing: |
| Tolerance mm : +- 1.30 | Rated speed rpm : 225 rack travel mm : 5.00 Tolerance mm : +- 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure | rack travel mm : 2.00 Rated speed rpm : 390 |
| hPa : 900 + Del. quantity | Tolerance 1/min : +- 30 Rated speed rpm : 125 |
| cm3/1000 strokes : 222.0 Tolerance cm3/1000 strokes : + 1.0 | CRT mm min. : > 6.00 |
| Check tolerance cm3/1000s. : + 4.0 Spreed | TORQUE CONTROL |
| Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 | Rated speed rpm : 950 rack travel mm : 13.85 Tolerance mm : +- 0.05 |
| cm3/1000s. : 9.0 | |

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 900 rack travel mm 13.85 Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa Rated speed rpm 500 rack travel mm 11.40 Tolerance mm 0.20

Rated speed rpm 500

Pressure hPa 215 rack travel mm 12.00 Tolerance mm : + 0.15

Pressure hPa 365 rack travel mm 12.85 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 900 950 Rated speed rpm Del. quantity

cm3/1000 strokes :

Tolerance cm3/1000 strokes : +-4.0

215.0

Check tolerance

cm3/1000s. 6.0

Aneroid pressure

hPa Rated speed rpm 500 Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes 2.0

Check tolerance

cm3/1000s. : +-4.0

BREAKAWAY

Rack travel in mm: 12,80 Rated speed rpm : 995

Tolerance 1/min : +-5

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 20.50 Tolerance mm : **←** 0.50 Del. quantity cm3/1000 strokes 265.0 Tolerance

cm3/1000 strokes : **←** 20.0 Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes 2.0 : +-Check tolerance cm3/1000s. : +--4.0

Spreed Tolerance

cm3/1000 strokes : 3.0 Check tolerance

cm3/1000s.6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402648866

Injection pump

Pump designation : PE8P120A720LS7125

: -10

EP type number : 0412628891

Governor

Governer design. : RQV350...1050PA795

: -7

Governer no. : 0421813768

Cust. part No. : 1305128

Customer—spec. information Customer : SCANIA

Motor : DS 14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750015

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.55 Tolerance mm : + 0.05

| Del. quantity cm3/1000 strokes | : 215.0 | Check tolerance cm3/1000s. | : 9.0 |
|--|--------------------|--|--|
| Tolerance cm3/1000 strokes | : + 1.0 | RATED SPEED | |
| Check tolerance cm3/1000s. | : +- 4.0 | control lever position degree | : 48.0 |
| Spreed Tolerance cm3/1000 strokes | : 6.0 | tolerance degree | |
| Check tolerance cm3/1000s. | : 9.0 | position degree tolerance degree | : +- 4.0 |
| Del. quantity cm3/1000 strokes Tolerance | : 17.0 | rack travel mm Rated speed rpm Tolerance 1/min | : 1095 |
| cm3/1000 strokes Check tolerance cm3/1000s. | <u> </u> | rack travel mm Rated speed rpm Tolerance 1/min | : 1215 |
| Spreed Tolerance cm3/1000 strokes Check tolerance | : 3.0 | rack travel mm Tolerance mm Rated speed rpm | : 0.50 : ← 0.50 : 1350 |
| cm3/1000s. | : 6.0 | | . 1336 |
| (B) SETTING OF INJ | JECTION PUMP | LOW IDLE | |
| OUDE SI FRIE DOOT | TON | control lever position degree tolerance degree | |
| control lever position degree | | control lever position degree tolerance degree | |
| Rated speed rpm | : 1170 | Testing: | |
| Rack travel in mm Tolerance mm | | Rated speed rpm rack travel mm Tolerance mm | : 350 : 4.70 : + 0.10 |
| FULL LOAD DELIVERY | AT FULL LOAD STOP | rack travel mm Rated speed rpm | : 2.00 : 400 |
| Rated speed rpm Aneroid pressure | + | Tolerance 1/min | : + 30 |
| hPa Del. quantity | : 900 | Rated speed rpm | |
| cm3/1000 strokes Tolerance | + | CRT mm mir. | : > 10.50 |
| cm3/1000 strokes Check tolerance cm3/1000s. | : + 1.0 : + 4.0 | TORQUE CONTROL | ************************************** |
| Spreed Tolerance cm3/1000 strokes | 1 | Rated speed rpm rack travel mm Tolerance mm | : 950 : 13.55 : ← 0.05 |
| | + | | |

Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance

: +- 24.0

LOW IDLE

cm3/1000s.

Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.0 : +-Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

BREAKAWAY

Rack travel in mm:

Rated speed rpm

12.50

1095

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402648869

Injection pump

Pump designation : PE8P120A720LS7125

: -10

EP type number : 0412628891

Governor

: RQV200...1050PA736 Governer design.

Governer no. : 0421813771

Cust. part No. : 1305137

Customer-spec. information Customer : SCANIA

Motor : DS14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901019

Opening pressure

Tolerance bar 1.5

Test lines : 1680750015

Outside diameter : 6.0 x inside diameter : 1.5 x Length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar 1.0

Prestroke mm 5.05 : +- 0.05 Tolerance mm

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : + - 0.30

Check

tolerance °NW : + 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm 700

Rack travel in mm : 13.55 Tolerance mm 0.05

| Del. quantity cm3/1000 strokes : | 215.0 | Check tolerance cm3/1000s. | : 9.0 |
|--|-----------------|---|--------------------------------|
| Tolerance cm3/1000 strokes : + | - 1.0 | RATED SPEED | |
| Check tolerance cm3/1000s. : + | - 4.0 | control lever position degree | : 62.0 |
| Spreed Tolerance cm3/1000 strokes : | 6.0 | tolerance degree | : +- 4.0 |
| Check tolerance cm3/1000s. : | 9.0 | position degree tolerance degree | : +- 4.0 |
| Del. quantity cm3/1000 strokes : Tolerance | 18.0 | rack travel mm Rated speed rpm Tolerance 1/min | : 1095 |
| cm3/1000 strokes : + Check tolerance cm3/1000s. : + | + | rack travel mm Rated speed rpm Tolerance 1/min | : 1215 |
| Spreed Tolerance cm3/1000 strokes : Check tolerance | 3.0 | rack travel mm Tolerance mm Rated speed rpm | : +- 0.50 |
| cm3/1000s. : | 6.0 | | : 1330 |
| (B) SETTING OF INJECTI WITH GOVERNOR | ION PUMP | control lever position degree | : 44.0 |
| GUIDE SLEEVE POSITION | | tolerance degree | |
| control lever position degree : - Rated speed rpm : | | control lever position degree tolerance degree Testing: | |
| Rack travel in mm : Tolerance mm : +- | 16.50 - 1.30 | Rated speed rpm rack travel mm Tolerance mm | : 225 : 5.00 : + 0.10 |
| FULL LOAD DELIVERY AT | FULL LOAD STOP | rack travel mm Rated speed rpm Tolerance 1/min | : 2.00 · 410 |
| Rated speed rpm : Aneroid pressure | + | Tolerance 1/min | : +- 30 |
| hPa : Del. quantity | 900 | Rated speed rpm | |
| cm3/1000 strokes : Tolerance cm3/1000 strokes : +- | <u> </u> | CRT mm min. | : > 6.50 |
| Check tolerance | 4.0 | TORQUE CONTROL | |
| Spreed Tolerance cm3/1000 strokes : | 6.0 | Rated speed rpm rack travel mm Tolerance mm | : 1050 : 13.55 : +- 0.05 |
| | | | |

| ANEROID/ALTITUDE COMPENSATOR TEST | |
|---|--|
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 900 : 13.55 : ← 0.05 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 500 : 11.40 : +- 0.20 |
| Rated speed rpm | : 500 |
| Pressure hPa rack travel mm Tolerance mm | : 215 : 12.00 : + 0.15 |
| Pressure hPa rack travel mm Tolerance mm | : 365 : 12.85 : + 0.05 |
| FUEL DELIVERY CHA | RACTERISTICS |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure | : 900 : 1050 |
| hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : - 500 : 160.0 : + 2.0 : + 4.0 |
| BREAKAWAY | |

Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50

rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 265.0

Tolerance cm3/1000 strokes : +- 20.0 Chack tolerance

Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes : +- 2.0

cm3/1000 strokes : +- 2.0 Check tolerance

cm3/1000s. : +- 4.0 Spreed Tolerance

cm3/1000 strokes : 3.0 Check tolerance

Check tolerance cm3/1000s. : 6.0

Rack travel in mm : 12.50 Rated speed rpm : 1095

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 : ISO 4113 Test oil

Combination No. : 0402648883

Injection pump

Pump designation : PE8P120A720LS7125

: -10

EP type number : 0412628891

Governor

Governer design. : RQV300...900PA795

: -11

Governer no. : 0421813847

Cust. part No. : 1305129

Customer-spec. information Customer : SCANIA Motor : DS14 48M

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar 1.5 Tolerance bar

Tolerance 1/h : +- 10.0

Test nozzle holde

: 1688901019 assembly

Opening pressure

bar Tolerance bar

Lube oil : 1409918004 Test lines : 1680750015

Outside diameter : 6.0

x inside diameter :

x Length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +-

Prestroke mm 5.05 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-2-7-3-4 Firing order

: - 5- 6- 8

: 0-45-90-135-180 : -225-270-315 Phasing

Tolerance : + - 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

700 Rated speed rpm

| Rack travel in mm Tolerance mm | | guide sleeve travel mm : 2.04 Tolerance mm : +- 0.25 |
|---|------------------------|--|
| Del. quantity cm3/1000 strokes | : 215.0 | Rated speed rpm : 395 guide sleeve |
| Tolerance cm3/1000 strokes | : +- 1.0 | travel mm : 2.62 Tolerance mm : +- 0.25 |
| Check tolerance cm3/1000s. | : +- 4.0 | + Rated speed rpm : 450 + guide sleeve + travel mm : 3.12 |
| Spreed Tolerance | | Tolerance mm : + 0.25 Rated speed rpm : 1190 |
| cm3/1000 strokes | : 6.0 | guide sleeve travel mm : 11.50 |
| Check tolerance cm3/1000s. | : 9.0 | Tolerance mm : +- 0.50 |
| 2nd speed rpm | : 300 | GUIDE SLEEVE POSITION |
| Del. quantity | : +- 0.30 | control lever position degree : - 1 |
| cm3/1000 strokes Tolerance | - | Rated speed rpm : 1035 |
| cm3/1000 strokes Check tolerance cm3/1000s. | : + 2.0 - : + 4.0 - | Rack travel in mm : 12.50 Tolerance mm : + 1.30 |
| Spreed Tolerance cm3/1000 strokes | : 3.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Check tolerance cm3/1000s. | : 6.0 | Rated speed rpm : 700 Aneroid pressure |
| (B) SETTING OF INJE | ECTION PUMP | hPa : - Del. quantity cm3/1000 strokes : 215.0 Tolerance |
| | - | cm3/1000 strokes : +- 1.0 Check tolerance |
| GUIDE SLEEVE TRAVEL | | cm3/1000s. : +- 4.0 - Spreed |
| Rated speed rpm : guide sleeve travel mm : | : 300 : 1.56 | - Tolerance - cm3/1000 strokes : 6.0 - Check tolerance |
| | + 0.15 | - cm3/1000s. : 9.0 |
| guide sleeve | 960 | - RATED SPEED |
| travel mm : Tolerance mm : | 8.18 + 0.20 | - - |
| Rated speed rpm : guide sleeve | 688 | - control lever - position degree : 47.0 - tolerance degree : +- 4.0 |
| travel mm : | 5.27 + 0.25 | - control lever |
| Rated speed rpm : | 345 | - position degree : 105.0 - tolerance degree : +- 4.0 - |
| | • | |

| rack travel mm : 12.50 Rated speed rpm : 945 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1040 Tolerance 1/min : +- 15 rack travel mm : 0.50 | Pressure hPa : - Rated speed rpm : 500 rack travel mm : 11.35 Tolerance mm : + 0.20 Rated speed rpm : 500 Pressure hPa : 215 rack travel mm : 12.00 |
|--|---|
| Tolerance mm : +- 0.50 Rated speed rpm : 1150 | Tolerance mm : + 0.15 Pressure hPa : 365 |
| LOW IDLE | rack travel mm : 12.85 Tolerance mm : + 0.05 |
| control lever position degree : 73.0 tolerance degree : +- 4.0 | FUEL DELIVERY CHARACTERISTICS Aneroid pressure |
| control lever position degree : 15.0 tolerance degree : + 4.0 Testing: | + hPa : - Rated speed rpm : 850 Del. quantity cm3/1000 strokes : 209.0 |
| Rated speed rpm : 300 rack travel mm : 4.80 Tolerance mm : + 0.10 | Tolerance - cm3/1000 strokes : +- 4.0 - Check tolerance - cm3/1000S. : +- 6.0 |
| Rated speed rpm : 175 CRT mm min. :> 6.30 | Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity |
| CONTINUOUS—ACTION CONTROL | cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 2.0 |
| Rated speed rpm : 325 | Check tolerance cm3/1000s. : +- 4.0 |
| TORQUE CONTROL | BREAKAWAY |
| Rated speed rpm : 850 rack travel mm : 13.55 Tolerance mm : + 0.05 | Rack travel in mm : 12.50 Rated speed rpm : 945 Tolerance 1/min : +- 5 |
| ANEROID/ALTITUDE COMPENSATOR TEST | STARTING FUEL DELIVERY |
| SETTING | Rated speed rpm : 100 |
| Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 13.55 Tolerance mm : + 0.05 | rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance |
| MEASUREMENT | - cm3/1000 strokes : +- 20.0 - Check tolerance - cm3/1000s. : +- 24.0 |

LOW IDLE

| : : | 300 4.80 |
|--------|-----------------|
| : +- | 0.30 |
| | |
| : | 17.0 |
| | |
| : +- | 2.0 |
| | |
| : +- | 4.0 |
| | |
| | |
| : | 3.0 |
| | |
| : | 6.0 |
| | : +- : +- : : - |

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 16.12.94

Test oil

: ISO 4113

Combination No.

: 0402648891

Injection pump

Pump designation : PE8P120A720LS7189

: -100

EP type number

: 0412628894

Governor

Governer design.

: RQV200...950PA736-8

Governer no.

: 0421813815

Cust. part No. : 1316120

Customer-spec. information Customer : SCANIA

Motor : DSC14 08

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve

: 1417413025

Inlet press. bar

2.5

Tolerance bar

0.1

Tolerance L/h

: +- 20.0

Test nozzle holde

assembly

: 1688901104

Opening pressure

bar

251.5

Tolerance bar

Test lines

: 1680750008

Outside diameter :

6.0

x inside diameter:

2.0

x length mm :

600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +-

Prestroke mm 5.05 Tolerance mm : +- 0.05

test only : ← 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180 : -225-270-315

: + 0.30Tolerance

Check

tolerance °NW : + - 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm

700

Rack travel in mm: 12.35

Tolerance mm

: +- 0.05

| Del. quantity cm3/1000 strokes : 220.0 | Spreed Tolerance cm3/1000 strokes : 8.0 |
|---|---|
| Tolerance cm3/1000 strokes : + 1.0 | Check tolerance cm3/1000s. : 12.0 |
| Check tolerance cm3/1000s. : + 4.0 | RATED SPEED |
| Spreed Tolerance cm3/1000 strokes : 8.0 | control lever position degree : 60.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. : 12.0 | control lever |
| 2nd speed rpm : 250 | position degree : 94.0 tolerance degree : +- 4.0 |
| Rack travel in mm: 4.50 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 16.0 | rack travel mm : 11.30 Rated speed rpm : 995 Tolerance 1/min : +- 5 |
| Tolerance cm3/1000 strokes : +- 3.0 Check tolerance | rack travel mm : 4.00 Rated speed rpm : 1105 Tolerance 1/min : +- 15 |
| cm3/1000s. : ← 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance | rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250 |
| cm3/1000s. : 8.0 | LOW IDLE |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 45.0 tolerance degree : +- 4.0 |
| GUIDE SLEEVE POSITION control lever | control lever position degree : 11.0 tolerance degree : +- 4.0 |
| position degree : -1 Rated speed rpm : 1150 | Testing: |
| Rack travel in mm: 9.50 Tolerance mm: + 2.50 | Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : + 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | Rated speed rpm : 150 |
| Rated speed rpm : 700 | CRT mm min. : > 5.80 |
| Aneroid pressure + + + + + + + + + + + + + + + + + + + | CONTINUOUS-ACTION CONTROL |
| Del. quantity cm3/1000 strokes : 220.0 Tolerance | Rated speed rpm : 275 |
| cm3/1000 strokes : +- 1.0 | TORQUE CONTROL |

| Rated speed rpm rack travel mm Tolerance mm | : 950 : 12.35 : ← 0.05 |
|---|---|
| ANEROID/ALTITUDE COMPENSATOR TEST | |
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 1500 : 12.35 : +- 0.05 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 500 : 10.00 : + 0.20 |
| Rated speed rpm | : 500 |
| Pressure hPa rack travel mm Tolerance mm | : 320 : 10.50 : ← 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 525 : 11.75 : ← 0.05 |
| FUEL DELIVERY CHA | ARACTERISTICS |
| hPa Rated speed rpm | : - : 950 |
| Del. quantity cm3/1000 strokes | : 206.0 |
| Tolerance cm3/1000 strokes | : ← 4.0 |
| Check tolerance cm3/1000s. | : +- 6.0 |
| Aneroid pressure | |
| hPa Rated speed rpm | : – : 500 |
| Del. quantity cm3/1000 strokes | : 144.0 |
| Tolerance cm3/1000 strokes | : + 1.0 |
| Check tolerance cm3/1000s. | : +- 4.0 |
| BREAKAWAY | |

Rack travel in mm : 11.30
Rated speed rpm : 995
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm 250 rack travel mm 4.50 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 : +-Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

| BOSCH INJ. PUMP | TEST SPECIFICATIONS |
|---|---|
| Note remarks | |
| Refer to Service adjustment instru See microcard(s) | |
| Edition Test oil | : 16.12.94 : ISO 4113 |
| Combination No. | : 0402648961 |
| Injection pump Pump designation EP type number | : -10 |
| Governor Governer design. Governer no. | : RQV3501050PA795 : -16 : 0421814054 |
| Cust. part No. | : 1340522 |
| | |
| Customer-spec. in Customer Motor | formation : SCANIA : DSI1457M |
| Customer | : SCANIA : DSI1457M |
| Customer Motor | : SCANIA : DSI1457M |
| Customer Motor TEST BENCH REQUIR Test oil inlet temp. °C | : SCANIA : DSI1457M |
| Customer Motor TEST BENCH REQUIR Test oil inlet temp. °C Tolerance °C | : SCANIA : DSI1457M EMENTS : 40 : + 2.0 : 1417413025 |
| Customer Motor TEST BENCH REQUIR Test oil inlet temp. °C Tolerance °C Overflow valve | : SCANIA : DSI1457M EMENTS : 40 : + 2.0 : 1417413025 |
| Test oil inlet temp. °C Tolerance °C Overflow valve Inlet press. bar Tolerance bar | : SCANIA : DSI1457M : DSI1457M : +0 : +- 2.0 : 1417413025 : 2.5 : +- 0.1 |

Test lines : 1680750008

E12

```
x inside diameter :
                       2.0
 x length mm :
 REMARKS
 Check and set without ROBO diaphragam
 (A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : + 1.0
Prestroke mm
                      5.05
Tolerance mm
                : ← 0.05
test only
                : + 0.10
Rack travel in mm : 10.50
               : +- 1.50
Tolerance mm
                : 1-2-7-3-4
:-5-6-8
Firing order
Phasing
                : 0-45-90-135-180
                : -225-270-315
                : + - 0.30
Tolerance
Check
tolerance °NW
                : +- 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. : 1
BASIC SETTING
Rated speed rpm :
                    700
Rack travel in mm: 13.25
Tolerance mm : + 0.05
```

Outside diameter : 6.0

| Del. quantity cm3/1000 strokes : 244.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Znd speed rpm : 350 Rack travel in mm : + 0.30 Del. quantity cm3/1000 strokes : 21.0 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : - 3.0 Tolerance cm3/1000 strokes : - 4.0 Tolerance mm : + 0.50 Tolerance cm3/1000 strokes : + 3.0 Tolerance 1/min : + 5 Tolerance 1/min : + 15 Spreed Tolerance cm3/1000 strokes : 4.0 Tolerance 1/min : + 15 Tolerance cm3/1000s. : 8.0 CB) SETTING OF INJECTION PUMP WITH GOVERNOR CONTROL lever position degree : 73.0 tolerance degree : + 4.0 CONTROL lever position degree : 73.0 tolerance degree : + 4.0 CONTROL lever position degree : - 1 Rated speed rpm : 1150 Testing: | |
|--|---|
| Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : 8.0 Check tolerance cm3/1000s. : 12.0 Znd speed rpm : 350 Rack travel in mm : 4.60 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 21.0 Tolerance m3/1000 strokes : 21.0 Tolerance 1/min : + 5 Tolerance 1/min : + 15 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance m3/1000s. : 8.0 Check tolerance cm3/1000s. : 8.0 Check tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance mm : 0.50 Tolerance 1/min : + 0.50 Tolerance mm : 4.00 Control lever position degree : 73.0 tolerance degree : 4.0 | |
| Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 2nd speed rpm : 350 Rack travel in mm : 4.60 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : - 3.0 Check tolerance cm3/1000 strokes : 4.0 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION Control lever position degree : 73.0 tolerance degree : + 4.0 Control lever position degree : 73.0 tolerance degree : + 4.0 Control lever position degree : 15.0 tolerance degree : + 4.0 | |
| Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 2nd speed rpm : 350 Rack travel in mm : 4.60 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000S. : + 6.0 Spreed Tolerance cm3/1000S. : + 6.0 Spreed Tolerance cm3/1000S. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR RATED SPEED RATED SPEED RATED SPEED Control lever position degree : 47.0 tolerance degree : + 4.0 rack travel mm : 12.20 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1210 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Spreed Tolerance cm3/1000S. : + 6.0 Tolerance mm : 4.00 Rated speed rpm : 1350 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Tolerance degree : + 4.0 Control lever position degree : 73.0 tolerance degree : + 4.0 Control lever position degree : 15.0 tolerance degree : + 4.0 | |
| Check tolerance cm3/1000s. : 12.0 2nd speed rpm : 350 | |
| tolerance degree : + 4.0 2nd speed rpm : 350 Rack travel in mm : 4.60 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Tolerance cm3/1000 strokes : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check t | |
| Pack travel in mm: 4.60 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 21.0 Tolerance cm3/1000 strokes: + 3.0 Check tolerance cm3/1000s. : + 6.0 Tolerance cm3/1000s. : + 6.0 Tolerance cm3/1000s. : + 6.0 Tolerance cm3/1000s. : + 6.0 Tolerance cm3/1000s. : + 6.0 Tolerance cm3/1000s. : + 6.0 Tolerance cm3/1000s. : + 6.0 Tolerance cm3/1000s. : + 6.0 Tolerance cm3/1000s. : 4.0 Tolerance 1/min: + 15 Tolerance 1/min: + 4.00 Tolerance 1/m | |
| Rack travel in mm: 4.60 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 21.0 Tolerance cm3/1000 strokes: + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes: 4.0 Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION Tack travel mm: 12.20 Rated speed rpm: 1095 Tolerance 1/min: + 5 Tolerance 1/min: + 15 Tolerance 1/min: + 15 Tolerance 1/min: + 0.50 Rated speed rpm: 1350 LOW IDLE Control lever position degree: 73.0 tolerance degree: + 4.0 control lever position degree: + 4.0 control lever position degree: + 4.0 control lever position degree: + 4.0 | |
| Tolerance cm3/1000 strokes : 21.0 Tolerance 1/min : + 5 Tolerance 1/min : + 15 Spreed Tolerance 1/min : + 15 Spreed Tolerance 1/min : + 15 Spreed Tolerance 1/min : + 15 Spreed Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 0.50 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 0.50 Tolerance 1/min : + 15 Tolerance 1/min : | |
| Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance rack travel mm : 0.50 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION Control lever position degree : -1 Control lever position degree : -1 Check tolerance degree : + 4.0 Control lever position degree : -4.0 Control lever position degree : -4.0 Control lever position degree : -4.0 | |
| Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 control lever position degree : -1 | |
| Cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR CONTrol lever position degree : 73.0 tolerance degree : 4.0 Control lever position degree : 15.0 tolerance degree : 4.0 Control lever position degree : 4.0 | |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 | |
| WITH GOVERNOR | |
| position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 control lever position degree : - 1 | |
| control lever control lever position degree : -1 control degree : +- 4.0 | |
| control lever + tolerance degree : +- 4.0 position degree : -1 | |
| Rated speed rpm : 1150 + Testing: | |
| Rack travel in mm: 16.50 Rated speed rpm: 350 | |
| Tolerance mm : + 1.30 | |
| FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 250 | |
| Rated speed rpm : 700 | |
| Del. quantity CONTINUOUS—ACTION CONTROL Cm3/1000 strokes : 244.0 | _ |
| Tolerance + Rated speed rpm : 325 cm3/1000 strokes : + 1.0 + | |

TORQUE CONTROL

Rated speed rpm 1050 13.25 rack travel mm Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 1500 rack travel mm 13.25 Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa Rated speed rpm 500 rack travel mm 10.00 Tolerance mm : +- 0.20

Rated speed rpm 500

Pressure hPa 320 rack travel mm 10.50 Tolerance mm : +- 0.20

Pressure hPa 525 11.75 rack travel mm Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1050

Rated speed rpm

Del. quantity cm3/1000 strokes : 222.0

Tolerance cm3/1000 strokes

Check tolerance cm3/1000s. 8.0

Aneroid pressure

hPa Rated speed rpm 500 Del. quantity

cm3/1000 strokes : 144.0 Tolerance

cm3/1000 strokes : +-Check tolerance

cm3/10005. 4.0

BREAKAWAY

Rack travel in mm : 12.20 Rated speed rpm : 1095 Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm : 100 10.00 rack travel mm Del. quantity cm3/1000 strokes : 160.0

Tolerance cm3/1000 strokes : \leftarrow 20.0

Check tolerance cm3/1000s. : ← 24.0

LOW IDLE

Rated speed rpm 350 rack travel mm 4.60 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0402648962

Injection pump

Pump designation : PE8P120A720LS7189

: -10

EP type number : 0412628893

Governor

Governer design. : RQV300...900PA795

: -18

Governer no. : 0421814059

Cust. part No. : 1340520

Customer-spec. information Customer : SCANIA

Motor : D 14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar

Test nozzle holde

assembly : 1688901104

Opening pressure

Tolerance bar

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 5.05 Tolerance mm

test only : + - 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-2-7-3-4 Firing order : - 5- 6- 8

: 0-45-90-135-180 Phasing : -225-270-315

Tolerance : + - 0.30Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm 700

Rack travel in mm: 12.25 Tolerance mm : **←** 0.05

| Del. quantity cm3/1000 strokes | : 216.0 | + guide sleeve + travel mm : 8.00 |
|--|---------------------|--|
| Tolerance cm3/1000 strokes | | + Tolerance mm : +- 0.10 |
| Check tolerance | | GUIDE SLEEVE POSITION |
| cm3/1000s. | : + 4.0 | control lever |
| Spreed Tolerance cm3/1000 strokes | : 8.0 | position degree : -1 Rated speed rpm : 1280 |
| Check tolerance cm3/1000s. | : 12.0 | Rack travel in mm : 12.00 Tolerance mm : +- 1.30 |
| 2nd speed rpm | : 300 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Rack travel in mm Tolerance mm Del. quantity | | Rated speed rpm : 700 Aneroid pressure |
| cm3/1000 strokes Tolerance | : 21.0 | + hPa : - Del. quantity + cm3/1000 strokes : 216.0 |
| cm3/1000 strokes Check tolerance | | Tolerance - cm3/1000 strokes : +- 1.0 |
| cm3/1000s. Spreed | : ← 6.0 | + Check tolerance + cm3/1000S. : +- 4.0 |
| Tolerance cm3/1000 strokes Check tolerance | | + Spreed + Tolerance |
| cm3/1000s. | | + cm3/1000 strokes : 8.0 + Check tolerance + cm3/1000S. : 12.0 |
| (B) SETTING OF IN | JECTION PUMP | RATED SPEED |
| GUIDE SLEEVE TRAV | EL | control lever |
| Rated speed rpm guide sleeve | : 300 | position degree : 46.0 tolerance degree : +- 4.0 |
| travel mm Tolerance mm | : 1.60 : + 0.20 | + control lever + position degree : 104.0 |
| Rated speed rpm guide sleeve | : 1045 | tolerance degree : +- 4.0 rack travel mm : 11.20 |
| travel mm Tolerance mm | : 9.50 : +- 0.20 | + Rated speed rpm : 945 + Tolerance 1/min : + 5 |
| Rated speed rpm guide sleeve | : 350 | rack travel mm : 4.00 Rated speed rpm : 1025 |
| travel mm Tolerance mm | : 2.20 : ← 0.30 | Tolerance 1/min : +- 15 |
| Rated speed rpm guide sleeve | : 650 | + rack travel mm : 0.50 + Tolerance mm : +- 0.50 |
| travel mm Tolerance mm | : 5.00 : + 0.30 | Rated speed rpm : 1150 |
| Rated speed rpm | : 950 | + LOW IDLE |

| | + | |
|---|------------------------|---|
| control lever position degree : tolerance degree : + | 73.0 | FUEL DELIVERY CHARACTERISTICS |
| control lever position degree : tolerance degree : + | 15.0 - 4.0 | Aneroid pressure hPa : - Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 204.0 |
| Testing: | ‡ | Tolerance |
| Rated speed rpm : rack travel mm : Tolerance mm : +- | 300 4.60 - 0.10 | cm3/1000 strokes : +- 4.0 Check tolerance cm3/1000s. : +- 8.0 |
| Rated speed rpm : | + | Aneroid pressure hPa : - |
| CRT mm min. :> | 7.50 | Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 144.0 |
| CONTINUOUS-ACTION CONT | FROL + | Tolerance cm3/1000 strokes : +- 1.0 |
| Rated speed rpm : | 290 | Check tolerance cm3/1000s. : +- 4.0 |
| TORQUE CONTROL | + | BREAKAWAY |
| Rated speed rpm : rack travel mm : Tolerance mm : +- | 900 12.25 - 0.05 | Rack travel in mm : 11.20 Rated speed rpm : 945 Tolerance 1/min : +- 5 |
| ANEROID/ALTITUDE COMPENSATOR TEST | + | |
| | ‡ | STARTING FUEL DELIVERY |
| SETTING | 500 | Rated speed rpm : 100 rack travel mm : 10.00 |
| Pressure hPa : rack travel mm : | 500 1500 12.25 | Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 160.0 |
| Tolerance mm : +- MEASUREMENT | 1.05 | Tolerance cm3/1000 strokes : +- 20.0 Check tolerance |
| Pressure hPa : Rated speed rpm : rack travel mm : Tolerance mm : +- | 500 10.00 | cm3/1000s. : +- 24.0 |
| | + | LOW IDLE |
| Rated speed rpm : Pressure hPa : | 1 | Rated speed rpm : 300 |
| rack travel mm : Tolerance mm : +- | 320 10.50 0.20 | rack travel mm : 4.60 Tolerance mm : +- 0.30 Del. quantity |
| rack travel mm : | 525 | cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : +- 3.0 |
| Tolerance mm : +- | U.U5 + | Check tolerance cm3/1000s. : +- 6.0 |

Spreed
Tolerance
cm3/1000 strokes :
Check tolerance
cm3/1000s. : 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0402648966

Injection pump

Pump designation : PE8P120A720LS7189

: -10

EP type number : 0412628893

Governor

Governer design. : RQV350...1050PA795

: -19

Governer no. : 0421814057

Cust. part No. : 1340523

Customer-spec. information Customer : SCANIA Motor : DSI1458M

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar Tolerance bar

Tolerance 1/h : +- 20.0

Test nozzle holde

assembly : 1688901104

Opening pressure

Tolerance bar

Lube oil : 1409918004 Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm :

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: Tolerance bar : +-

Prestroke mm 5.05 Tolerance mm : +- 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4 : - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : + - 0.30

Check

tolerance °NW : ← 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 700

| Rack travel in mm Tolerance mm | | guide sleeve travel mm : 2.64 Tolerance mm : +- 0.25 |
|--|---------------------|--|
| Del. quantity cm3/1000 strokes | : 252.0 | Rated speed rpm : 520 guide sleeve |
| Tolerance cm3/1000 strokes | : +- 1.0 | travel mm : 3.19 Tolerance mm : + 0.25 |
| Check tolerance cm3/1000s. | : +- 4.0 | Rated speed rpm : 1390 guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50 |
| Spreed Tolerance cm3/1000 strokes | : 8.0 | GUIDE SLEEVE POSITION |
| Check tolerance cm3/1000s. | : 12.0 | control lever position degree : - 1 |
| Del. quantity cm3/1000 strokes | : 21.0 | Rated speed rpm : 1210 |
| Tolerance cm3/1000 strokes Check tolerance | 1 | Rack travel in mm : 12.60 Tolerance mm : +- 1.30 |
| cm3/1000s. Spreed Tolerance | : + 6.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes Check tolerance | + | Rated speed rpm : 700 Aneroid pressure |
| cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR | : 8.0 JECTION PUMP | hPa : - Del. quantity cm3/1000 strokes : 252.0 Tolerance cm3/1000 strokes : +- 1.0 |
| | | Check tolerance cm3/1000s. : +- 4.0 |
| GUIDE SLEEVE TRAVE | + | Spreed Tolerance |
| Rated speed rpm guide sleeve travel mm | : 350 + | cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 |
| Tolerance mm | : + 0.20 | |
| guide sleeve | : 1108 | RATED SPEED |
| travel mm Tolerance mm | : 8.05 : + 0.15 | control lever |
| Rated speed rpm guide sleeve | : 781 | position degree : 48.0 tolerance degree : +- 4.0 |
| travel mm Tolerance mm | : 5.24 : + 0.25 | control lever position degree : 107.0 |
| Rated speed rpm guide sleeve | : 411 | tolerance degree : +- 4.0 rack travel mm : 12.60 |
| travel mm | : 2.06 : ← 0.25 | Rated speed rpm : 1095 Tolerance 1/min : +- 5 |
| Rated speed rpm | : 461 | rack travel mm : 4.00 |
| E20 | | |

| | 4.0.0 |
|---|--|
| Rated speed rpm Tolerance 1/min | : 1220 : + 15 |
| rack travel mm Tolerance mm Rated speed rpm | : ← 0.50 |
| LOW IDLE | |
| control lever position degree tolerance degree | : 73.0 : + 4.0 |
| control lever position degree tolerance degree | : 15.0 : ← 4.0 |
| Testing: | |
| Rated speed rpm rack travel mm Tolerance mm | : 350 : 4.60 : + 0.10 |
| | |
| Rated speed rpm | : 250 |
| CRT mm min. CONTINUOUS-ACTION | : > 7.50 |
| CRT mm min. | : > 7.50 |
| CRT mm min. CONTINUOUS—ACTION | : > 7.50 |
| CRT mm min. CONTINUOUS—ACTION Rated speed rpm | : > 7.50 I CONTROL : 325 |
| CRT mm min. CONTINUOUS—ACTION Rated speed rpm TORQUE CONTROL Rated speed rpm rack travel mm | : > 7.50 CONTROL : 325 : 1050 : 13.65 |
| CRT mm min. CONTINUOUS—ACTION Rated speed rpm TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE | : > 7.50 CONTROL : 325 : 1050 : 13.65 |
| CRT mm min. CONTINUOUS—ACTION Rated speed rpm TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST | : > 7.50 CONTROL : 325 : 1050 : 13.65 |

| Aneroid pressure hPa Rated speed rpm Del. quantity | : | | - 1050 |
|---|---|----|-----------|
| cm3/1000 strokes | : | | 230.0 |
| Tolerance cm3/1000 strokes Check tolerance | : | + | 4.0 |
| cm3/1000s. | : | +- | 6.0 |
| Aneroid pressure hPa Rated speed rpm Del. quantity | : | | - 500 |
| cm3/1000 strokes | : | | 144.0 |
| Tolerance cm3/1000 strokes Check tolerance | : | + | 1.0 |
| cm3/1000s. | : | +- | 4.0 |
| BREAKAWAY | | | |

Rack travel in mm : 12.60 Rated speed rpm : 1095 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

| rated speed rpm | ī | 100 |
|------------------|------|--------|
| rack travel mm | : | 10.00 |
| Tolerance mm | : +- | - 0.20 |
| Del. quantity | | |
| cm3/1000 strokes | : | 160.0 |
| Tolerance | | |
| cm3/1000 strokes | : +- | - 20.0 |
| Check tolerance | | |
| cm3/1000s. | : +- | - 24.0 |

LOW IDLE

| Del. quantity | | |
|-------------------------------|------|------|
| cm3/1000 strokes Tolerance | : | 21.0 |
| cm3/1000 strokes | : +- | 3.0 |
| Check tolerance cm3/1000s. | : +- | 6.0 |
| Spreed Tolerance | | |
| cm3/1000 strokes | : | 4.0 |
| Check tolerance | | |
| cm3/1000s. | : | 8.0 |

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and

adjustment instructions. See microcard(s) W400/...

Edition : 21.12.94 Test oil : ISO 4113

Combination No. : 0402648973

Injection pump

Pump designation : PE8P120A320LS7873

: 0412628880 EP type number

Governor

Governer design. : RQ300/950PA1121

Governer no. : 0421801701

Cust. part No. : 04221534KY0165-17

Customer-spec. information

Customer : KHD

Motor : BF8M1015/C Power KW : 400.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5 : ← 0.1 Tolerance bar

Test nozzle holde

assembly : 1688901105

Opening pressure

208.5 bar Tolerance bar

Lube oil : 1409918004

Test lines : 1680750075 Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

Check electrically unlatched starting fuel delivery (EES) with 24 volt.

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 4.05 Tolerance mm

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-8-7-2-6 :-5-4-3 Firing order

Phasing : 0-45-90-135-180

: -225-270-315 : + - 0.30

Tolerance Check

tolerance °NW : + - 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm : 15.35 Tolerance mm : \leftarrow 0.05

| Del. quantity cm3/1000 strokes : | : 380.0 | Rated speed rpm : 450 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 |
|--|------------------|--|
| Tolerance cm3/1000 strokes : | : + 1.0 | Rated speed rpm : 1150 |
| Check tolerance cm3/1000s. : | + 4.0 | guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50 |
| Spreed Tolerance cm3/1000 strokes : | 5.0 | GUIDE SLEEVE POSITION |
| Check tolerance cm3/1000s. : | 9.0 | control lever position degree : - 1 |
| 2nd speed rpm : | 300 | Rated speed rpm : 700 |
| Rack travel in mm : Tolerance mm : Del. quantity | 5.00 + 0.10 | Rack travel in mm : 20.00 Tolerance mm : +- 0.80 |
| cm3/1000 strokes : Tolerance | 20.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| | +- 3.0 | Rated speed rpm : 950 Aneroid pressure |
| ** / 4 * * * * * * * * * * * * * * * * * | + 6.0 | hPa : 1600 Del. quantity |
| Tolerance cm3/1000 strokes : | 8.0 | cm3/1000 strokes : 380.0 Tolerance |
| Check tolerance cm3/1000s. | 12.0 | cm3/1000 strokes : +- 1.0 Check tolerance |
| | 1 | cm3/1000S. : +- 4.0 Spreed |
| (B) SETTING OF INJE | CTION PUMP | Tolerance cm3/1000 strokes : 5.0 Check tolerance |
| GUIDE SLEEVE TRAVEL | | cm3/1000s. : 9.0 |
| Rated speed rpm : | 300 | RATED SPEED |
| guide sleeve travel mm : | 2.23 | MATED SI EED |
| | ÷ 0.10 | control lever position degree : 103.0 |
| Rated speed rpm : guide sleeve | 1001 | tolerance degree : +- 4.0 |
| travel mm : | ← 0.10 + 0.10 | rack travel mm : 14.30 Rated speed rpm : 995 |
| Rated speed rpm : guide sleeve | 950 | Tolerance 1/min : +- 5 |
| travel mm : | + 6.00 + 0.10 | rack travel mm : 4.00 Rated speed rpm : 1070 Tolerance 1/min : +- 15 |
| Rated speed rpm : guide sleeve | 385 | rack travel mm : 0.50 Tolerance mm : +- 0.50 |
| travel mm : | 5.22 + 0.10 | Rated speed rpm : 1150 |
| | + | |

| | | + |
|---|--|---|
| LOW IDLE | | START CUT-OUT |
| control lever position degree tolerance degree | : 75.0 : + 4.0 | Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 220 |
| Testing: | | + Check + speed 1/min : < 240 |
| Rated speed rpm rack travel mm Tolerance mm | : 300 : 5.00 : ← 0.10 | FUEL DELIVERY CHARACTERISTICS |
| rack travel mm Rated speed rpm Tolerance 1/min | : 2.00 : 360 : ← 20 | + Aneroid pressure + hPa : - Rated speed rpm : 400 - Del. quantity - cm3/1000 strokes : 250.0 |
| Rated speed rpm CRT mm min. | | Tolerance cm3/1000 strokes : +- 1.0 check tolerance cm3/1000s. : +- 4.0 |
| TORQUE CONTROL | | - 1 4.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 15.35 | BREAKAWAY Rack travel in mm: 14.30 Rated speed rpm: 995 Tolerance 1/min: +- 5 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | Tolerance 1/min : +- 5 |
| SETTING | | STARTING FUEL DELIVERY |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 400 : 1600 : 15.35 : + 0.05 | Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 220.0 |
| MEASUREMENT | | + Tolerance - cm3/1000 strokes : +- 20.0 |
| Pressure hPa Rated speed rpm rack travel mm Folerance mm | | - Check tolerance - cm3/1000s. : +- 24.0 |
| Rated speed rpm | : 400 | LOW IDLE |
| Pressure hPa rack travel mm Tolerance mm | : 570 : 11.85 : ← 0.20 | Rated speed rpm : 300 rack travel mm : 5.00 Tolerance mm : +- 0.10 |
| Pressure hPa rack travel mm Tolerance mm | : 14.45 | Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : +- 3.0 |
| | | Check tolerance : +- 6.0 |

Spreed
Tolerance
cm3/1000 strokes :
Check tolerance
cm3/1000s. : 8.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 15.12.94 Test oil : ISO 4113 Combination No. : 0402648974 Injection pump Pump designation : PE8P120A320LS7875 EP type number : 0412628881 Governor Governer design. : RQ250/1150PA1122 Governer no. : 0421801704 Cust. part No. : Customer—spec. information Customer : DAEWOO Motor : V2-8TC TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413025 Inlet press. bar : Tolerance bar Test nozzle holde : 1688901105 assembly Opening pressure : 208.5 : ← 1.5 bar Tolerance bar Lube oil : 1409918004 Test lines : 1680750089

```
x inside diameter :
                         3.0
 x length mm :
                      600
 REMARKS
 (A) INJECTION PUMP SETTING VALUES
 Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : + 1.0
Prestroke mm
Tolerance mm
test only
                 : + 0.10
Rack travel in mm: 16.00
Tolerance mm
                 : +- 1.50
                 : 8-7-2-6-3
:-5-4-1
Firing order
Phasing
                : 0-45-90-135-180
                 : -225-270-315
Tolerance
                 : + - 0.30
Check
tolerance °NW
                 : + - 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
                      8
BASIC SETTING
Rated speed rpm
                    1150
Rack travel in mm :
                     13.60
Tolerance mm
                 : +- 0.05
Del. quantity
cm3/1000 strokes :
                     208.0
```

Outside diameter :

| | | + Tolerance mr : +- 0.10 |
|--|--------------------|---|
| Tolerance cm3/1000 strokes | : ← 1.0 | Rated speed rpm : 1370 guide sleeve |
| Check tolerance cm3/1000s. | : + 4.0 | travel mm : 11.50 Tolerance mm : + 0.50 |
| Spreed Tolerance cm3/1000 strokes | : 7.0 | GUIDE SLEEVE POSITION |
| Check tolerance cm3/1000s. | : 10.0 | Rated speed rpm : 600 Rack travel in mm : 20.00 |
| 2nd speed rpm | : 300 | Tolerance mm : +- 0.80 |
| Rack travel in mm Tolerance mm Del. quantity | | FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 |
| cm3/1000 strokes Tolerance cm3/1000 strokes | | Aneroid pressure hPa Del. quantity |
| Check tolerance cm3/1000s. Spreed | | + cm3/1000 strokes : 208.0 + Tolerance |
| Tolerance cm3/1000 strokes | : 5.0 | + cm3/1000 strokes : ← 1.0 + Check tolerance - cm3/1000S. : ← 4.0 |
| Check tolerance cm3/1000s. | : 8.0 | + Spreed + Tolerance + cm3/1000 strokes : 7.0 |
| (B) SETTING OF IN. WITH GOVERNOR | JECTION PUMP | + Check tolerance + cm3/1000S. : 10.0 |
| GUIDE SLEEVE TRAVE | ī. | RATED SPEED |
| Rated speed rpm guide sleeve travel mm Tolerance mm | : 2.39 | control lever position degree : 34.0 tolerance degree : + 4.0 |
| Rated speed rpm guide sleeve travel mm Tolerance mm | : 1207 | control lever position degree : 95.0 tolerance degree : +- 4.0 |
| Rated speed rpm | : 650 | rack travel mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : +- 8 |
| guide steeve travel mm Tolerance mm | : 6.00 : ← 0.10 | rack travel mm : 4.00 Rated speed rpm : 1280 Tolerance 1/min : +- 15 |
| Rated speed rpm guide sleeve travel mm Tolerance mm | | + rack travel mm : 0.50 |
| | | Tolerance mm : +- 0.50 Rated speed rpm : 1350 |
| guide sleeve | : 450 : 6.00 | LOW IDLE |
| | . 0.00 | 1 |

| control lever | | |
|---|----------------------|--|
| position degree tolerance degree | : 75.0 : +- 4.0 | START CUT-OUT |
| control lever | | + Rated speed rpm : > 100 + Check |
| position degree | : 14.0 | speed 1/min :> 80 Rated speed rpm : < 220 |
| tolerance degree | : +- 4.0 | + Rated speed rpm : < 220 |
| Testing: | | + Check + speed 1/min : < 240 |
| Rated speed rpm | : 300 | |
| rack travel mm Tolerance mm | : 5.80 | FUEL DELIVERY CHARACTERISTICS |
| Tolerance mm | : + 0.10 | + Amanaid management |
| rack travel mm | : 2.00 | + Aneroid pressure + hPa : + |
| Rated speed rpm | : 375 | + Rated speed rpm : 650 |
| Tolerance 1/min | : ← 20 | + Del. quantity + cm3/1000 strokes : 226.0 |
| Rated speed rpm | : 200 | + Tolerance |
| | | - cm3/1000 strokes : +- 3.0 |
| CRT mm min. | : > 8.60 | + Check tolerance + cm3/1000S. : + 6.0 |
| | | - CIID/10003 + 0.0 |
| TORQUE CONTROL | | Aneroid pressure |
| Rated speed rom | · 650 | + hPa : - + Rated speed rpm : 500 |
| Rated speed rpm rack travel mm Tolerance mm | : 13.60 | + Del. quantity |
| Tolerance mm | : 0.05 | Del. quantity cm3/1000 strokes : 137.0 |
| | · | + Tolerance + cm3/1000 strokes : +- 1.0 |
| ANEROID/ALTITUDE | | + Check tolerance + cm3/1000s. : + 4.0 |
| COMPENSATOR TEST | | + cm3/1000s. : +- 4.0 |
| SETTING | | BREAKAWAY |
| Rated speed rpm | : 500 | Ţ |
| Pressure hPa | : 1500 | Rack travel in mm: 12.60 |
| rack travel mm Tolerance mm | : 13.6U · +- 0.05 | + Rated speed rpm : 1202 + Tolerance 1/min : +- 8 |
| TOTEL WINDE WAS | | + Total ance Trimer |
| MEASUREMENT | | <u> </u> |
| Pressure hPa | : - | + STARTING FUEL DELIVERY |
| Rated speed rpm rack travel mm | : 500 : 9.00 | † Del. quantity |
| Tolerance mm | : +- 0.20 | + cm3/1000 strokes : 203.0 |
| Datad amand and | | + Tolerance |
| Rated speed rpm | : 500 | + cm3/1000 strokes : + 10.0 + Check tolerance |
| Pressure hPa | : 650 | + cm3/1000s. : +- 14.0 |
| rack travel mm Tolerance mm | : 12.50 : +- 0.20 | † |
| (Oterance min | _ | Į |
| Pressure hPa | : 250 | LOU THE |
| rack travel mm Tolerance mm | : 10.00 : +- 0.05 | LOW IDLE |
| TOCOT WITCO TIRE | | Rated speed rpm : 300 |
| | | + rack travel mm : 5.80 |
| | | |

| Tolerance mm | : +- | 0.20 |
|--|------|------|
| Del. quantity cm3/1000 strokes Tolerance | : | 18.0 |
| cm3/1000 strokes Check tolerance | : +- | 3.0 |
| cm3/1000s. Spreed | : + | 6.0 |
| Tolerance cm3/1000 strokes | : | 5.0 |
| Check tolerance cm3/1000s. | : | 8.0 |

| BOSCH INJ. PUMP TEST SPECIFICATIONS | | x inside diameter : 2.0 x length mm : 600 | |
|---|--|--|------------|
| Note remarks | | + | |
| Refer to Service adjustment instru See microcard(s) | | REMARKS | |
| Edition Test oil | : 12.12.94 : ISO 4113 | - Check and set without ROBO dia | pnragam |
| Combination No. | : 0402678818 | (A) INTEGTION DIND CETTING MALL | ıro |
| Injection pump Pump designation | : PE8P120A720LS7189 : -10 | (A) INJECTION PUMP SETTING VALU Set equal delivery quant. per values | とう |
| EP type number | : 0412628893 | BEGINNING OF DELIVERY | |
| Governor design. Governer no. | : RSV3501050P1A512 : -4 : 0421833384 | Test pressure bar : 31.0 Tolerance bar : +- 1.0 | |
| Cust. part No. | : 1340526 | Prestroke mm : 5.05 Tolerance mm : +- 0.05 | |
| | • | test only : +- 0.10 | |
| Customer-spec. in Customer Motor | : SCANIA | Rack travel in mm : 10.50 Tolerance mm : + 1.50 | |
| | . 0 14 | Firing order : 1-2-7- :-5-6- | 3- 4 8 |
| TEST BENCH REQUIR | EMENTS | | 5 |
| Test oil inlet temp. °C | : 40 | - Phasing : 0-45-90-13 - : -225-270-31 | 5–180 5 |
| Tolerance °C | : +- 2.0 | - Tolerance : +- 0.30 - Check | |
| Overflow valve | : 1417413025 | tolerance °NW : +- 0.75 | |
| Inlet press. bar Tolerance bar | : 2.5 : ← 0.1 | BEGINNING OF DELIVERY DIFFERENCE | E |
| Test nozzle holde assembly | : 1688901104 - | Time to cyl. no. : 1 | |
| • | . 1000/01104 | - BASIC SETTING | |
| Opening pressure bar Tolerance bar | : 251.5 : +- 1.5 | Rated speed rpm : 700 | |
| Test lines | : 1680750008 | - Rack travel in mm : 12.25 - Tolerance mm : +- 0.05 | |
| Outside diameter | : 6.0 | | |
| | | | |

F03

| Del. quantity cm3/1000 strokes : 216.0 | Tolerance cm3/1000 strokes : +- 1.0 Check tolerance |
|--|--|
| Tolerance cm3/1000 strokes : + 1.0 | cm3/1000S. : +- 4.0 Spreed Tolerance |
| Check tolerance cm3/1000S. : + 4.0 | cm3/1000 strokes : 8.0 Check tolerance |
| Spreed | cm3/1000s. : 12.0 |
| cm3/1000 strokes : 8.0 | RATED SPEED |
| Check tolerance cm3/1000s. : 12.0 | control lever position degree : 63.0 |
| 2nd speed rpm : 350 | tolerance degree : +- 4.0 |
| Rack travel in mm : 4.60 + Tolerance mm : + 0.30 + Del. quantity | control lever position degree : 113.0 tolerance degree : +- 4.0 |
| cm3/1000 strokes : 21.0 | rack travel mm : 11.20 |
| cm3/1000 strokes : + 3.0 + Check tolerance cm3/1000s. : + 6.0 + | Rated speed rpm : 1095 Tolerance 1/min : +- 5 |
| Spreed + Tolerance + cm3/1000 strokes : 4.0 + | rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : +- 15 |
| Check tolerance cm3/1000s. : 8.0 | rack travel mm : 0.85 |
| (B) SETTING OF INJECTION PUMP | Tolerance mm : + 0.55 Rated speed rpm : 1300 |
| WITH GOVERNOR | LOW IDLE |
| GUIDE SLEEVE POSITION | control lever position degree : 80.0 tolerance degree : +- 4.0 |
| control lever | and I lave |
| position degree : -3 + Rated speed rpm : 800 + | control lever |
| rated speed (pill . Out | position degree : 30.0 tolerance degree : +- 4.0 |
| Rack travel in mm: 0.50 + Tolerance mm: + 0.20 + | Setting point w/out bumper spring |
| governor spring pre-tension + | Rated speed rpm : 350 rack travel mm : 4.10 |
| click setting x : 6.00 | Testing: |
| FULL LOAD DELIVERY AT FULL LOAD STOP | Rated speed rpm : 350 |
| Rated speed rpm : 700 Aneroid pressure | rack travel mm : 4.60 Tolerance mm : + 0.10 |
| hPa : - + Del. quantity + | rack travel mm : 2.00 Rated speed rpm : 475 |
| cm3/1000 strokes : 216.0 + | Tolerance 1/min : +- 30 |

F04

```
Tolerance
Rated speed rpm
                       100
                                                 cm3/1000 strokes : \leftarrow 1.0
                                                 Check tolerance
CRT mm min.
                  : > 19.50
                                                 cm3/1000s.
                                                                          4.0
TORQUE CONTROL
                                                 BREAKAWAY
Rated speed rpm
                      1050
                       12.25
                                                 Rack travel in mm :
rack travel mm
                                                                       11.20
Tolerance mm
                  : +- 0.05
                                                 Rated speed rpm :
                                                                       1095
                                                 Tolerance 1/min
ANEROID/ALTITUDE
COMPENSATOR TEST
                                                 STARTING FUEL DELIVERY
SETTING
                                                 Rated speed rpm
                                                                        100
                                                                        10.00
                                                 rack travel mm
                                                                   : +- 0.20
Rated speed rpm
                       500
                                                 Tolerance mm
Pressure hPa
                      1500
                                                 Del. quantity
rack travel mm
                       12.25
                                                 cm3/1000 strokes :
                                                                        160.0
                  : +- 0.05
Tolerance mm
                                                 Tolerance
                                                 cm3/1000 strokes : +- 20.0
MEASUREMENT
                                                 Check tolerance
                                                 cm3/1000s.
                                                                   : +- 24.0
Pressure hPa
                       500
Rated speed rpm
                       10.00
rack travel mm
                  : +- 0.20
Tolerance mm
                                                 LOW IDLE
Rated speed rpm
                       500
                                                                        350
                                                 Rated speed rpm
                       320
                                                 rack travel mm
Pressure hPa
                                                                         4.60
                       10.50
rack travel mm
                                                 Tolerance mm
                                                                         0.30
                  : + - 0.20
Tolerance mm
                                                 Del. quantity
                                                 cm3/1000 strokes :
                                                                         21.0
                       525
Pressure hPa
                                                 Tolerance
rack travel mm
                       11.75
                                                 cm3/1000 strokes
                                                                          3.0
Tolerance mm
                  : ← 0.05
                                                 Check tolerance
                                                 cm3/1000s.
                                                                   : +-
                                                                          6.0
                                                 Spreed
                                                 Tolerance
FUEL DELIVERY CHARACTERISTICS
                                                 cm3/1000 strokes :
                                                                          4.0
                                                 Check tolerance
Aneroid pressure
                                                 cm3/1000s.
                                                                          8.0
                      1050
Rated speed rpm
Del. quantity
cm3/1000 strokes :
                       199.0
Tolerance
cm3/1000 strokes : +-
                        4.0
Check tolerance
cm3/1000s.
                         6.0
Aneroid pressure
hPa
Rated speed rpm
                       500
Del. quantity
```

F05

cm3/1000 strokes :

| BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks | |
|--|--|
| | |
| Edition Test oil | : 21.12.94 : ISO 4113 |
| Combination No. | : 0402735809 |
| Injection pump Pump designation EP type number | : PES5P120A720/3LS7310 : 0412725817 |
| Governor Governer design. Governer no. | : RQ325/1000PA1106 : 0421801698 |
| Cust. part No. | : 3–7302 |
| Motor Power KW | : MAN : D2865LUHO5 : 198.0 |
| TEST BENCH REQUIR | EMENTS |
| Test oil inlet temp. °C Tolerance °C | : 40 : + 2.0 |
| Overflow valve | : 1417413025 |
| Inlet press. bar Tolerance bar | : 1.5 : + 0.1 |
| Overflow quantity min. L/h Tolerance L/h | : 115 : + 20.0 |
| Test nozzle holde assembly | : 1688901105 |
| Opening pressure bar Tolerance bar | : 208.5 : ← 1.5 |

```
Test lines : 1680750089
Outside diameter :
                        8.0
x inside diameter :
                        3.0
x Length mm :
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : +- 1.0
Prestroke mm
                       5.15
                 : +- 0.05
Tolerance mm
test only
                : +- 0.10
Rack travel in mm : 12.80 Tolerance mm : + 0.50
Firing order : 1-3-5-4-2
                 : 0-72-144-216-288
Phasing
                 : ← 0.30
Tolerance
Check
tolerance °NW
                 : ← 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
S.o.d. blocking
                    5
                      5
Barrel no.
BASIC SETTING
Rated speed rpm :
                     550
Rack travel in mm :
                     11.50
```

| Tolerance mm : + 0.05 | + Dated and my . 700 |
|---|--|
| Del. quantity cm3/1000 strokes : 252.0 | Rated speed rpm : 399 guide sleeve travel mm : 4.44 |
| Tolerance | Tolerance mm : + 0.10 |
| cm3/1000 strokes : +- 1.0 | Rated speed rpm : 530 guide sleeve |
| Check tolerance cm3/1000s. : +- 4.0 | travel mm : 7.00 Tolerance mm : + 0.10 |
| Spreed Tolerance cm3/1000 strokes : 5.0 | Rated speed rpm : 1210 guide sleeve travel mm : 11.50 |
| Check tolerance | + Tolerance mm : + 0.50 |
| cm3/1000s. : 9.0 | Rated speed rpm : 802 guide sleeve |
| 2nd speed rpm : 325 | + travel mm : 7.23 + Tolerance mm : + 0.10 |
| Rack travel in mm : 4.80 Tolerance mm : + 0.20 | Ŧ <u></u> |
| Del. quantity cm3/1000 strokes : 35.0 | GUIDE SLEEVE POSITION |
| Tolerance cm3/1000 strokes : +- 3.0 | Rated speed rpm : 700 |
| Check tolerance cm3/1000s. : +- 6.0 | Rack travel in mm: 15.50 Tolerance mm: +- 0.80 |
| Spreed Tolerance | T |
| cm3/1000 strokes : 8.0 Check tolerance | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000s. : 12.0 | Rated speed rpm : 550 Aneroid pressure |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | + hPa : 900 + Del. quantity + cm3/1000 strokes : 252.0 |
| WITH GOVERNOR | + Tolerance |
| GUIDE SLEEVE TRAVEL | cm3/1000 strokes : + 1.0 Check tolerance |
| Rated speed rpm : 325 | + cm3/1000s. : +- 4.0 + Spreed |
| guide sleeve travel mm : 2.70 | Tolerance cm3/1000 strokes : 5.0 |
| Tolerance mm : +- 0.10 | + Check tolerance + cm3/1000S. : 9.0 |
| Rated speed rpm : 1059 guide sleeve | |
| travel mm : 7.62 Tolerance mm : +- 0.10 | RATED SPEED |
| Rated speed rpm : 1000 | control lever |
| guide sleeve travel mm : 7.30 | <pre>position degree : 103.0 tolerance degree : + 4.0</pre> |
| Tolerance mm : +- 0.10 | rack travel mm : 12.00 |
| Rated speed rpm : 769 | + Rated speed rpm : 1053 |
| guide steeve | Tolerance 1/min : + 8 |
| guide sleeve travel mm : 7.08 Tolerance mm : + 0.10 | |

| Rated speed rpm : 1130 Tolerance 1/min : +- 15 | İ | Pressure hPa rack travel mm Tolerance mm | : 250 : 9.20 : +- 0.05 |
|---|---------------|--|------------------------------|
| rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1250 | + | Pressure hPa rack travel mm | : 2000 : 13.00 |
| | ‡ | Tolerance mm | : +- 0.05 |
| LOW IDLE | + | Prescure hPa rack travel mm Tolerance mm | : 11.80 |
| control lever position degree : 73.0 tolerance degree : +- 4.0 | † | Pressure hPa rack travel mm Tolerance mm | |
| Testing: | $\frac{1}{1}$ | roter di lee min | 0.15 |
| Rated speed rpm : 325 rack travel mm : 4.80 Tolerance mm : + 0.10 | Ţ | FUEL DELIVERY CHA | RACTERISTICS |
| rack travel mm · 200 | <u> </u> | Aneroid pressure hPa | : 2000 |
| rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : +- 20 | Ŧ | Rated speed rpm | |
| | Ŧ | Del. quantity cm3/1000 strokes | : 266.0 |
| Rated speed rpm : 200 | ‡ | Tolerance cm3/1000 strokes | : +- 3.0 |
| CRT mm min. : > 6.50 | ‡ | Check tolerance cm3/1000s. | : + 6.0 |
| TORQUE CONTROL | + | Aneroid pressure | |
| Rated speed rpm : 550 | ‡ | hPa Rated speed rpm | : 2000 : 750 |
| rack travel mm : 11.50 Tolerance mm : + 0.05 | ‡ | Del. quantity cm3/1000 strokes | |
| Rated speed rpm : 1000 | <u> </u> | Tolerance cm3/1000 strokes | : +- 2.0 |
| rack travel mm : 13.00 Tolerance mm : + 0.10 | ‡ | Check tolerance cm3/1000s. | : +- 5.0 |
| Rated speed rpm : 750 | ‡ | Aneroid pressure | |
| rack travel mm : 13.00 Tolerance mm : + 0.10 | ‡ | hPa Rated speed rpm | : – : 500 |
| | ‡ | Del. quantity cm3/1000 strokes | : 150.0 |
| ANEROID/ALTITUDE COMPENSATOR TEST | ‡ | Tolerance cm3/1000 strokes | : +- 1.0 |
| SETTING | † † | Check tolerance cm3/1000s. | : +- 4.0 |
| Rated speed rpm : 500 | ‡ | BREAKAWAY | |
| Pressure hPa : 900 rack travel mm : 11.50 | ‡ | | |
| Tolerance mm : ← 0.05 | ‡ | Rack travel in mm Rated speed rpm | |
| MEASUREMENT | <u>†</u> | Tolerance 1/min | : +- 8 |
| Rated speed rpm : 500 | Į | | |

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 8.90 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 75.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 14.0

LOW IDLE

325 Rated speed rpm 4.80 rack travel mm Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

| BOSCH INJ. PUMP TEST SPECIFICATIONS | | Test lines : 1680750089 | |
|---|--|---|--|
| Note remarks | | Outside diameter : 8.0 | |
| Refer to Service adjustment instru See microcard(s) | Info for test and -ctions. | x inside diameter : 3.0 x length mm : 600 | |
| Edition Test oil | : 21.12.94 : ISO 4113 | REMARKS | |
| Combination No. | - | | |
| Injection pump Pump designation | : PES5P120A720/3LS7310 - | | |
| EP type number | : -1 : 0412725820 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values | |
| jovernor joverner design. joverner no. | : RQ325/1000PA1106 - : 0421801698 - | BEGINNING OF DELIVERY | |
| ust. part No. | : 51.11103-7350 | Test pressure bar : 31.0 Tolerance bar : + 1.0 | |
| ustomer-spec. in ustomer otor ower KW | : MAN : D2865LUHO5 | Prestroke mm : 5.15 Tolerance mm : + 0.05 test only : + 0.10 | |
| | | Rack travel in mm : 12.80 Tolerance mm : +- 0.50 | |
| EST BENCH REQUIR | EMEN 12 | Firing order : 1-3-5-4- | |
| Test oil inlet cemp. °C Tolerance °C Everflow valve | : 40 : + 2.0 | - - Phasing : 0-72-144-216-28 - Tolerance : +- 0.30 - Check - tolerance °NW : +- 0.75 | |
| ver flow valve | . 1417413023 | - toterance NW ; +- 0.75 | |
| nlet press. bar olerance bar | : + 1.5 : + 0.1 | BEGINNING OF DELIVERY DIFFERENCE | |
| verflow quantity in. l/h olerance l/h | : 115 : ← 20.0 | Time to cyl. no. : 5 S.o.d. blocking Barrel no. : 5 | |
| est nozzle holde ssembly | : 1688901105 | - BASIC SETTING | |
| pening pressure ar | : 208.5 | - Rated speed rpm : 550 - | |
| olerance bar | : ← 1.5 | Rack travel in mm : 11.50 | |

| Del. quantity | | | |
|--|--------------------------|---------------------------------------|---|
| Del. quantity | Tolerance mm | : ← 0.05 | † |
| Tolerance cm3/1000 strokes : + 1.0 | Del. quantity | | + guide sleeve |
| cm3/1000 strokes : + 1.0 Rated speed rpm : 540 guide sleeve travel mm : 7.00 Tolerance mm : + 0.10 Spreed cm3/1000 strokes : 5.0 Rated speed rpm : 1210 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 Check tolerance cm3/1000s. : 9.0 GUIDE SLEEVE POSITION Check tolerance cm3/1000s. : 9.0 GUIDE SLEEVE POSITION Rack travel in mm : 4.80 rolerance mm : + 0.20 rolerance mm : + 0.20 rolerance mm : + 0.80 Rack travel in mm : 15.50 rolerance mm : + 0.80 m3/1000 strokes : 35.0 rolerance cm3/1000s strokes : + 3.0 rolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOR rolerance mm : + 0.80 Check tolerance cm3/1000s strokes : + 3.0 rolerance mm/3/1000s strokes : + 4.0 spreed rolerance cm3/1000s strokes : 8.0 rolerance cm3/1000s strokes : 252.0 rolerance cm3/1000s strokes : 252.0 rolerance cm3/1000s strokes : 252.0 rolerance cm3/1000s strokes : - 1.0 rolerance cm3/1000s strokes : 5.0 rolerance mm : + 0.10 rolerance mm : + 0.10 rolerance mm : + 0.10 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance cm3/1000s rolerance : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + 4.0 rolerance degree : + | | : 252.0 | |
| Travel mm | | : +- 1.0 | |
| Tolerance mm : + 0.10 | Charle dal anno | | + guide sleeve |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 2nd speed rpm : 325 Rack travel in mm : 4.80 Tolerance mm : + 0.20 Del. quantity | cm3/1000s. | : +- 4.0 | |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 2nd speed rpm : 325 Rack travel in mm : 4.80 Tolerance mm : + 0.20 Del. quantity cm3/1000S strokes : 35.0 Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S strokes : 4.0 Check tolerance cm3/1000S. : + 6.0 Spreed Tolerance cm3/1000S. : + 6.0 Check tolerance cm3/1000S. : + 6.0 Check tolerance cm3/1000S strokes : 8.0 Check tolerance cm3/1000S. : 12.0 Check tolerance cm3/1000S strokes : 8.0 Check tolerance cm3/1000S. : 12.0 Check tolerance cm3/1000S strokes : 5.0 Check tolerance cm3/1000S strokes : 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S strokes : 5.0 Check tolerance cm3/100OS strokes : 5.0 Check tolerance cm3/100OS strokes : 5.0 Check tolerance cm3/100OS strokes : 5.0 Check tolerance cm3/100OS strokes : 5.0 Check tolerance cm | Spreed | | Rated speed rpm : 1210 |
| Tolerance mm : + 0.50 | Tolerance | | 🕂 guide sleeve |
| Cm3/1000s 325 Substitution 325 Rack travel in mm 4.80 Tolerance mm + 0.20 Rack travel in mm 15.50 Tolerance mm + 0.80 Tolera | cm3/1000 strokes | : 5.0 | |
| 2nd speed rpm : 325 Rack travel in mm : 4.80 Tolerance mm : + 0.20 Del quantity | | | + |
| Rated speed rpm : 325 Rated speed rpm : 700 | cm3/1000S. | : 9.0 | CHINE SLEEVE POSTTION |
| Rack travel in mm : 4.80 Tolerance mm : + 0.20 Del. quantity Cm3/1000 strokes : 35.0 Tolerance Cm3/1000 strokes : + 3.0 Check tolerance Cm3/1000 strokes : 8.0 Check tolerance Cm3/1000 strokes : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve Travel mm : 2.49 Tolerance mm : + 0.10 Rated speed rpm : 1059 guide sleeve Travel mm : 7.34 Tolerance mm : + 0.10 Rated speed rpm : 1000 Quide sleeve Travel mm : 7.34 Tolerance mm : + 0.10 Rated speed rpm : 1000 Quide sleeve Travel mm : 7.01 Tolerance mm : + 0.10 Rated speed rpm : 1053 Tolerance 1/min : + 8 Tolerance 1/min : + 15 Rated speed rpm : 1130 Tolerance 1/min : + 15 | 2nd speed rnm | : 325 | T GOIDE STEENE LOSILION |
| Tolerance mm | , , | | + Rated speed rpm : 700 |
| Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 2.49 Tolerance mm : + 0.10 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Tolerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1053 Tolerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1053 Tolerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1053 Tolerance mm : + 0.10 Rated speed rpm : 1053 Tolerance 1/min : + 8 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 | | | + |
| cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 3.0 FULL LOAD DELIVERY AT FULL LOAD STORM DELIVERY AT FULL LOAD | | : 0.20 | |
| Tolerance cm3/1000 strokes : + 3.0 | uel. quantity | · 35 0 | T Toterance mm : + U.8U |
| FULL LOAD DELIVERY AT FULL LOAD STO Check tolerance | | . 55.0 | *************************************** |
| Check tolerance cm3/1000s. : + 6.0 | | : ← 3.0 | + FULL LOAD DELIVERY AT FULL LOAD STO |
| Aneroid pressure Tolerance Com3/1000 strokes : 8.0 Check tolerance Com3/1000s. : 12.0 COM3/1000s. : 12.0 | Check tolerance | | + |
| Tolerance | | : 6.0 | |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 325 guide sleeve travel mm : 2.49 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Folerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1053 Tolerance 1/min : + 8 Tolerance mm : + 0.10 Rated speed rpm : 7.01 Folerance mm : 7.01 Folerance mm : + 0.10 Rated speed rpm : 130 Tolerance 1/min : + 15 Rated speed rpm : 130 Tolerance 1/min : + 15 | | | + Aneroid pressure |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 325 guide sleeve travel mm : 2.49 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Tolerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1053 Tolerance 1/min : + 8 Tolerance mm : + 0.10 Rated speed rpm : 7.01 Tolerance mm : 4.00 Rated speed rpm : 130 Rated speed rpm : 130 Tolerance 1/min : + 15 Rated speed rpm : 130 Tolerance 1/min : + 15 | | . 80 | T Hrd : 700 1 Del quantity |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 325 guide sleeve travel mm : 2.49 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Tolerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1053 Tolerance mm : + 0.10 Rated speed rpm : 1053 Tolerance 1/min : + 8 Tolerance mm : + 0.10 Rated speed rpm : 130 Tolerance 1/min : + 15 Rated speed rpm : 130 Tolerance 1/min : + 15 | | . 0.3 | + cm3/1000 strokes : 252.0 |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 325 guide sleeve travel mm : 2.49 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Tolerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1053 Tolerance mm : + 0.10 Rated speed rpm : 1053 Tolerance 1/min : + 8 Tolerance mm : + 0.10 Rated speed rpm : 130 Tolerance 1/min : + 15 Rated speed rpm : 130 Tolerance 1/min : + 15 | | : 12.0 | + Tolerance |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 325 guide sleeve travel mm : 2.49 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Folerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1053 Tolerance 1/min : + 8 Tolerance mm : + 0.10 Rated speed rpm : 7.01 Folerance mm : 7.01 Folerance mm : + 0.10 Rated speed rpm : 130 Tolerance 1/min : + 15 Rated speed rpm : 130 Tolerance 1/min : + 15 | | | + cm3/1000 strokes : +- 1.0 |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 325 guide sleeve travel mm : 2.49 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Tolerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1053 Tolerance mm : + 0.10 Rated speed rpm : 1053 Tolerance 1/min : + 8 Tolerance mm : + 0.10 Rated speed rpm : 130 Tolerance 1/min : + 15 Rated speed rpm : 130 Tolerance 1/min : + 15 | (D) SETTING OF THE | IECTION DUMD | t Check tolerance |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 | | FOLLOW LOUE | Spreed |
| GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 2.49 Tolerance mm : + 0.10 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Tolerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1130 Rated speed rpm : 1130 Rated speed rpm : 15 | WELL GOATINGOIL | | |
| Rated speed rpm : 325 guide sleeve travel mm : 2.49 Tolerance mm : 40.10 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Tolerance mm : 4.00 Rated speed rpm : 1000 Tolerance 1/min : + 8 Tolerance mm : 4.00 Rated speed rpm : 1130 Rated speed rpm : 1130 Tolerance 1/min : + 15 Guide sleeve | | | + cm3/1000 strokes : 5.0 |
| Rated speed rpm : 325 guide sleeve travel mm : 2.49 Folerance mm : + 0.10 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Folerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 7.01 Folerance mm : + 0.10 Rated speed rpm : 7.01 Folerance mm : + 0.10 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1130 Rated speed rpm : 15 | GUIDE SLEEVE TRAVE | i <u>L</u> | + Check tolerance |
| guide sleeve travel mm : 2.49 Tolerance mm : + 0.10 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Tolerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 7.01 Tolerance mm : + 0.10 Rated speed rpm : 7.01 Tolerance mm : + 0.10 Rated speed rpm : 130 Rated speed rpm : 130 Rated speed rpm : 1130 Tolerance 1/min : + 15 Rated speed rpm : 15 | Dated speed nom | . 325 | † cm3/1000S. : 9.0 |
| Travel mm : 2.49 Tolerance mm : + 0.10 Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Tolerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 7.01 Tolerance mm : + 0.10 Rated speed rpm : 7.01 Tolerance mm : + 0.10 Rated speed rpm : 1130 Tolerance 1/min : + 15 Guide sleeve | • • | | I |
| Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Folerance mm : 4.00 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 7.01 Folerance mm : 7.01 Rated speed rpm : 7.77 Rated speed rpm : 7.77 Rated speed rpm : 130 Rated speed rpm : 130 Rated speed rpm : 130 Rated speed rpm : 1130 Rated speed rpm : 1130 Tolerance 1/min : + 15 Guide sleeve | travel mm | : 2.49 | + RATED SPEED |
| Rated speed rpm : 1059 guide sleeve travel mm : 7.34 Folerance mm : 4.00 Rated speed rpm : 1000 Rated speed rpm : 1000 Rated speed rpm : 7.01 Folerance mm : 7.01 Rated speed rpm : 7.77 Rated speed rpm : 7.77 Rated speed rpm : 130 Rated speed rpm : 130 Rated speed rpm : 130 Rated speed rpm : 1130 Rated speed rpm : 1130 Tolerance 1/min : + 15 Guide sleeve | Tolerance mm | : ← 0.10 | + |
| position degree 103.0 tolerance degree + 4.0 tolerance 1/min + 10.00 tolerance 1/mi | | | † |
| travel mm : 7.34 Folerance mm : + 0.10 Rated speed rpm : 1000 Rated speed rpm : 1053 guide sleeve travel mm : 7.01 Folerance mm : + 0.10 Rated speed rpm : 4.00 Rated speed rpm : 1130 Rated speed rpm : 777 Rated speed rpm : 15 guide sleeve | ausida al caus | | |
| Tolerance mm | travel mm | : 7.34 | tolerance degree : +- 4.0 |
| Rated speed rpm : 1000 | Tolerance mm | : ← 0.10 | + |
| guide sleeve travel mm : 7.01 Folerance mm : +- 0.10 Rated speed rpm : 777 Folerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1130 Tolerance 1/min : +- 15 guide sleeve | | | rack travel mm : 12.00 |
| ravel mm : 7.01 Folerance mm : + 0.10 | Rated speed rpm | : 1000 | + Rated speed rpm : 1053 |
| Rated speed rpm : 777 + Tolerance 1/min : 4.00 Tolerance 1/min : + 15 Tolerance 1/min : + 15 | juide sleeve | . 7.01 | T Toterance T/min : +- 8 |
| Rated speed rpm : 1130 Tolerance 1/min : +- 15 Guide sleeve | Tolerance mm | : + 0.10 | Frack travel mm : 4.00 |
| Rated speed rpm : 777 + Tolerance 1/min : +- 15 guide sleeve + | . The court of the court | | + Rated speed rpm : 1130 |
| guide sleeve cravel mm : 7.01 + rack travel mm : 0.50 Folerance mm : + 0.10 + Tolerance mm : + 0.50 | | : 777 | + Tolerance 1/min : +- 15 |
| ravel mm : 7.01 + rack travel mm : 0.50 + Tolerance mm : + 0.50 | guide sleeve | . 7.04 | † |
| to tenance mm : + 0.50 | cravel mm | · · · · · · · · · · · · · · · · · · · | + rack travel mm : U.5U |
| | loterance mm | : T U. IU | + Toterance mm : +- U.DU |

| Rated speed rpm : 1250 | rack travel mm : 13.00 Tolerance mm : + 0.05 |
|---|--|
| LOW IDLE | Pressure hPa : 1150 rack travel mm : 11.80 Tolerance mm : + 0.10 |
| control lever position degree : 73.0 tolerance degree : +- 4.0 | Pressure hPa : 600 rack travel mm : 10.95 Tolerance mm : +- 0.15 |
| Testing: | Toterance nm : += 0.15 |
| Rated speed rpm : 325 rack travel mm : 4.80 Tolerance mm : + 0.10 | FUEL DELIVERY CHARACTERISTICS |
| rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : +- 20 | Aneroid pressure hPa : 2000 Rated speed rpm : 1000 Del. quantity |
| Rated speed rpm : 200 | cm3/1000 strokes : 266.0 Tolerance |
| CRT mm min. : > 6.50 | cm3/1000 strokes : + 3.0 check tolerance cm3/1000s. : + 6.0 |
| TORQUE CONTROL | Aneroid pressure |
| Rated speed rpm : 550 rack travel mm : 11.50 Tolerance mm : + 0.05 | hPa : 2000 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 286.0 |
| Rated speed rpm : 1000 rack travel mm : 13.00 Tolerance mm : + 0.10 | Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 266.0 Tolerance cm3/1000strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : 2000 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 286.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 |
| Rated speed rpm : 750 rack travel mm : 13.00 Tolerance mm : + 0.10 | Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 150.0 |
| ANEROID/ALTITUDE COMPENSATOR TEST | Tolerance : + 1.0 - Check tolerance |
| SETTING | - cm3/1000s. : +- 4.0 |
| Rated speed rpm : 500 Pressure hPa : 900 rack travel mm : 11.50 Tolerance mm : + 0.05 | BREAKAWAY |
| Tolerance mm : +- 0.05 MEASUREMENT | Rack travel in mm : 12.00 Rated speed rpm : 1053 Tolerance 1/min : +- 8 |
| Rated speed rpm : 500 | ‡ |
| Pressure hPa : 250 rack travel mm : 9.20 Tolerance mm : + 0.05 | STARTING FUEL DELIVERY Rated speed rpm : 100 |
| Pressure hPa : 2000 | Rated speed rpm : 100 rack travel mm : 8.90 Tolerance mm : +- 0.20 |

Del. quantity cm3/1000 strokes : 75.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm 325 4.80 rack travel mm Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes 8.0 Check tolerance cm3/1000s. 12.0

| + | Outside diameter : 8.0 |
|--|--|
| BOSCH INJ. PUMP TEST SPECIFICATIONS | x inside diameter : 3.0 |
| Note remarks | x Length mm : 600 |
| Refer to Service Info for test and adjustment instructions. See microcard(s) W400/ | REMARKS |
| Edition : 02.12.94 Test oil : ISO 4113 | |
| Combination No. : 0402746883 | |
| Injection pump Pump designation : PES6P11DA32ORS7198 EP type number : 0412716802 | (A) INJECTION PUMP SETTING VALUES |
| Governor Governer design.: RQV2751250PA942K Governer no.: 0421815234 | Set equal delivery quant. per values |
| Clust mont No . CCED 50074 | BEGINNING OF DELIVERY |
| Cust. part No. : CCEP 5097A | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Customer—spec. information Customer : RVI Motor : MIDR 06.02.26 L Power KW : 132.5 | Prestroke mm : 4.58 Tolerance mm : + 0.05 test only : + 0.10 |
| TEST BENCH REQUIREMENTS | Rack travel in mm : 13.00 Tolerance mm : +- 0.50 |
| Test oil inlet temp. °C : 40 Tolerance °C : + 2.0 | Firing order : 1-5-3-6-2- : 4 |
| Overflow valve : 1417413025 | Phasing : 0-60-120-180-240 : -300 |
| Inlet press. bar : 1.5 Tolerance bar : + 0.1 | Tolerance : + 0.30 Check tolerance °NW : + 0.50 |
| Test nozzle holde assembly : 0681343009 | BEGINNING OF DELIVERY DIFFERENCE |
| Opening pressure bar : 173.5 Tolerance bar : + 1.5 | Time to cyl. no. : 1 |
| Lube oil : 1409918004 | BASIC SETTING |
| Test lines : 1680750089 | Rated speed rpm : 1250 |
| Τ | |

| Rack travel in mm : 14.65 Tolerance mm : + 0.05 | Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 3.5 |
|---|--|
| Del. quantity cm3/1000 strokes : 158.0 | Spreed Tolerance |
| Tolerance cm3/1000 strokes : + 1.0 | cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 |
| Check tolerance cm3/1000s. : + 3.5 | RATED SPEED |
| Spreed Tolerance cm3/1000 strokes : 4.0 | control lever position degree : 114.0 tolerance degree : + 4.0 |
| Check tolerance cm3/1000s. : 7.5 | rack travel mm : -1.00 Rated speed rpm : 1320 |
| 2nd speed rpm : 275 | Tolerance 1/min : +- 5 |
| Rack travel in mm : -9.50 Tolerance mm : + 0.20 Del. quantity | rack travel mm : −10.65 Rated speed rpm : 1490 Tolerance 1/min : +- 15 |
| cm3/1000 strokes : 19.5 Tolerance cm3/1000 strokes : + 2.5 | rack travel mm : -14.15 Tolerance mm : +- 0.55 |
| Check tolerance cm3/1000s. : + 5.0 Spreed | Rated speed rpm : 1600 |
| Tolerance cm3/1000 strokes : 4.5 | FOM IDE |
| Check tolerance cm3/1000s. : 7.5 | control lever position degree : 62.0 tolerance degree : +- 4.0 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | Testing: |
| † | Rated speed rpm : 200 |
| GUIDE SLEEVE POSITION | CRT mm max. : < -8.90 |
| control lever position degree : -1 | CONTINUOUS-ACTION CONTROL |
| Rated speed rpm : 1385 | Rated speed rpm : 415 |
| Rack travel in mm : 13.60 Tolerance mm : + 1.30 | TORQUE CONTROL |
| FULL LOAD DELIVERY AT FULL LOAD STOP | Rated speed rpm : 1250 |
| Rated speed rpm : 1250 Aneroid pressure hPa : 1000 | Rated speed rpm : 750 rack travel mm : -0.80 Tolerance mm : +- 0.10 |
| Del. quantity cm3/1000 strokes : 158.0 | Rated speed rpm : 750 rack travel mm : -5.60 |

| Tolerance mm | | ‡ | Del. quantity cm3/1000 strokes | : 62.0 |
|--|-------------------------------|---|---|------------------------------|
| Rated speed rpm rack travel mm Tolerance mm | : 750 : -8.00 : +- 0.10 | ‡ | Tolerance cm3/1000 strokes Check tolerance | : +- 5.0 |
| | | ‡ | cm3/1000s. Spreed | : +- 8.0 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | 1 | Tolerance cm3/1000 strokes | : 8.0 |
| SETTING | | + | Aneroid pressure hPa | : |
| Rated speed rpm Pressure hPa | : 1250 : 1000 | ‡ | Rated speed rpm Del. quantity cm3/1000 strokes | |
| MEASUREMENT | , , , , , , | ‡ | Tolerance cm3/1000 strokes | |
| Pressure hPa Rated speed rpm | : - | ‡ | Check tolerance cm3/1000s. Spreed | : +- 8.0 |
| rack travel mm Tolerance mm | : -3.40 | 1 | Tolerance cm3/1000 strokes | : 8.0 |
| Rated speed rpm | : 1250 | ╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸╏╸ | Aneroid pressure | |
| Pressure hPa rack travel mm Tolerance mm | : 220 : -2.60 | ‡ | Rated speed rpm Del. quantity | |
| Tolerance mm Pressure hPa | | ‡ | cm3/1000 strokes Tolerance cm3/1000 strokes | |
| rack travel mm Tolerance mm | : -1.75 | ‡ | Check tolerance cm3/1000s. | |
| START CUT-OUT | | | BREAKAWAY | |
| Rated speed rpm Check speed 1/min Rated speed rpm Check speed 1/min | : > 130 | +++++++++++++++++++++++++++++++++++++++ | Rack travel in mm Rated speed rpm Tolerance 1/min | : 1320 |
| FUEL DELIVERY CHA | ARACTERISTICS | | STARTING FUEL DEL | |
| Aneroid pressure hPa | : 1000 | +++++++++++++++++++++++++++++++++++++++ | Rated speed rpm Del. quantity cm3/1000 strokes | : 100 : 100.0 |
| Rated speed rpm Del. quantity cm3/1000 strokes | | ‡ | Tolerance cm3/1000 strokes Check tolerance | : +- 15.0 |
| Tolerance cm3/1000 strokes | | + | cm3/1000s. | : +- 19.0 |
| Check tolerance cm3/1000s. | : ← 5.0 | ‡ | | |
| Aneroid pressure hPa | : - | ‡ | LOW IDLE | |
| Rated speed rpm | : 750 | ‡ | Rated speed rpm rack travel mm | : 275 : -9 .50 |

| Tolerance mm | : +- | 0.20 |
|--------------------------------|------|------|
| Del. quantity cm3/1000 strokes | : | 19.5 |
| Tolerance cm3/1000 strokes | : +- | 2.5 |
| Check tolerance cm3/1000s. | : +- | 5.0 |
| Spreed Tolerance | | |
| cm3/1000 strokes | : | 4.5 |
| Check tolerance | | |
| cm3/1000s. | : | 7.5 |

| BOSCH INJ. PUMP I | EST SPECIFICATIONS | † Test lines : 1680750089 |
|---|--|--|
| Note remarks | | Outside diameter : 8.0 |
| Refer to Service adjustment instru See microcard(s) | Info for test and ctions. W400/ | x inside diameter: 3.0 x length mm : 600 |
| Edition Test oil | : 20.12.94 : ISO 4113 | REMARKS |
| Combination No. | : 0402746949 | - |
| Injection pump Pump designation EP type number | : PES6P120A720RS7224 : -2 : 0412726893 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Sovernor | | BEGINNING OF DELIVERY |
| Governer design. | : RQV2751100PA975 : -3K : 0421815350 | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Cust. part No. | : | Prestroke mm : 5.15 Tolerance mm : + 0.05 |
| ~ · · · · · · · · · · · · · · · · · · · | | test only : + 0.10 |
| Customer-spec. in Customer Motor | : IVECO-FRANCE | Rack travel in mm : 10.50 Tolerance mm : +- 1.50 |
| TEST BENCH REQUIR | EMENTS | Firing order : 1-5-3-6- : 4 |
| Test oil inlet temp. °C Tolerance °C | : 40 : : +- 2.0 | Phasing : 0-60-120-180-24 : -300 : Tolerance : + 0.30 |
| Overflow valve | : 1417413025 | - Check - tolerance °NW : +- 0.75 |
| Inlet press. bar Tolerance bar | : 1.5 : +- 0.1 | BEGINNING OF DELIVERY DIFFERENCE |
| Overflow quantity min. l/h Molerance l/h | : 140 : +- 20.0 | Time to cyl. no. : 1 |
| Test nozzle holde | - | BASIC SETTING |
| est nozzte notde ssembly | : 1688901105 | Rated speed rpm : 1100 |
| pening pressure par Tolerance bar | : 208.5 | Rack travel in mm : 12.75 Tolerance mm : + 0.05 |

| Del. quantity cm3/1000 strokes : 218.0 | guide sleeve - travel mm : 13.50 - Tolerance mm : +- 0.50 |
|---|--|
| Tolerance cm3/1000 strokes : +- 1.0 | - GUIDE SLEEVE POSITION |
| Check tolerance cm3/1000S. : +- 4.0 | |
| Spreed Tolerance | - control lever - position degree : - 1 - Rated speed rpm : 1140 |
| cm3/1000 strokes : 5.0 - | - Rack travel in mm : 16.50 - Tolerance mm : +- 1.30 |
| cm3/1000s. : 9.0 | Toterance lixii : +- 1.50 |
| 2nd speed rpm : 275 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Rack travel in mm : 5.50 Tolerance mm : +- 0.20 | - Rated speed rpm : 1100 - Aneroid pressure |
| Del. quantity cm3/1000 strokes : 26.0 Tolerance | - hPa : 1200 - Del. quantity - cm3/1000 strokes : 218.0 |
| cm3/1000 strokes : + 3.0 Check tolerance | - cm3/1000 strokes : 218.0 - Tolerance - cm3/1000 strokes : +- 1.0 |
| cm3/1000s. : +- 6.0 Spreed | - Check tolerance - cm3/1000S. : +- 4.0 |
| Tolerance cm3/1000 strokes : 8.0 | - Spreed - Tolerance |
| Check tolerance cm3/1000s. : 12.0 | - cm3/1000 strokes : 5.0 - Check tolerance - cm3/1000S. : 9.0 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | - RATED SPEED |
| | - - |
| GUIDE SLEEVE TRAVEL | - control lever - position degree : 119.0 |
| Rated speed rpm : 275 guide sleeve | tolerance degree : + 4.0 |
| travel mm : 1.90 Tolerance mm : + 0.10 | - rack travel mm : 11.70 - Rated speed rpm : 1145 - Tolerance 1/min : +- 5 |
| Rated speed rpm : 1145 guide sleeve | rack travel mm : 4.00 |
| travel mm : 10.40 + Tolerance mm : + 0.10 + | Rated speed rpm : 1235 Tolerance 1/min : +- 15 |
| Rated speed rpm : 750 quide sleeve | rack travel mm : 0.50 Tolerance mm : +- 0.50 |
| travel mm : 6.10 Tolerance mm : + 0.25 | Rated speed rpm : 1350 |
| Rated speed rpm : 430 guide sleeve | LOW IDLE |
| travel mm : 3.60 Tolerance mm : + 0.25 | control lever |
| Rated speed rpm : 1360 | position degree : 75.0 |
| | |

| | | 1 Talamanaa mm |
|---|------------|---|
| Testing: | | + Tolerance mm : + 0.20 |
| Rated speed rom | : 275 | Rated speed rpm : 900 |
| rack travel mm | : 5.50 | Pressure hPa : 410 |
| Rated speed rpm rack travel mm Tolerance mm | : +- 0.10 | Pressure hPa : 410 rack travel mm : 8.80 |
| | | Pressure hPa : 410 rack travel mm : 8.80 Tolerance mm : +- 0.20 |
| Rated speed rpm | : 100 | + |
| | > 7.00 | Pressure hPa : 750 rack travel mm : 11.35 |
| CRT mm min. | : > 7.00 | + rack travel mm : 11.35 |
| | | + Tolerance mm : + 0.05 |
| CONTINUOUS-ACTIO | N CONTROL | |
| | | + START CUT-OUT |
| Rated speed rpm | : 335 | † |
| | | + Rated speed rpm : > 170 |
| ZODOUE CONTROL | | |
| TORQUE CONTROL | | speed 1/min : > 150 Rated speed rpm : < 220 |
| Dotod mond | . 4400 | + Kated speed rpm : < 22U |
| Rated speed rpm rack travel mm Tolerance mm | 1100 | + Check |
| rack travel mm | : 12.75 | speed 1/min : < 240 |
| ioterance mm | : +- 0.05 | Check speed 1/min : > 150 Rated speed rpm : < 220 Check speed 1/min : < 240 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 228.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : 1200 Rated speed rpm : 500 |
| Rated cheed rom | • ••• | FUEL DELIVERY CHARACTERISTICS |
| rack travel mm | . 12.75 | T TOLL DELIVERY CHARACTERISTICS |
| Rated speed rpm rack travel mm Tolerance mm | +- 0.10 | Aneroid pressure |
| rocer ance min | 0.10 | I hpa · 1200 |
| Pated cheed rom | • 700 | hPa : 1200 Rated speed rpm : 900 |
| Rated speed rpm rack travel mm Tolerance mm | . 100 | Del. quantity |
| Tolononce mm | . 11.00 | cm3/1000 strokes : 228.0 |
| oterance min | . +- 0.10 | Telepage |
| lated enough mam | . 500 | Tolerance |
| aced speed rpill | 12.50 | + cm3/1000 strokes : + 3.0 |
| lated speed rpm rack travel mm Tolerance mm | 12.30 | Check tolerance cm3/1000s. : +- 6.0 |
| oterance mm | : +- 0.10 | + cm3/10005. : + 6.0 |
| Rated speed rom | • 350 | Aneroid pressure |
| Rated speed rpm rack travel mm Tolerance mm | · 11 / (1) | hPa : 1200 |
| Tolerance mm | + 0.20 | Rated speed rpm : 500 |
| rocer dince min | 0.20 | Del. quantity |
| Rated speed rpm | • 500 | - cm3/1000 strokes : 243.0 |
| rack travel mm | · 7.70 | Tolerance |
| ack travel mm olerance mm | : +- 0.20 | - cm3/1000 strokes : +- 3.0 |
| o cor appearance | | Check tolerance |
| | | |
| NEROID/ALTITUDE | | 1 |
| OMPENSATOR TEST | | Aneroid pressure |
| | | + hPa : - |
| | | Rated speed rpm : 500 |
| SETTING | | + Del. quantity |
| | | + cm3/1000 strokes : 120.0 |
| Rated speed rpm | : 900 | + Tolerance |
| Pressure hPa | | + cm3/1000 strokes : +- 1.0 |
| ack travel mm | | - Check tolerance |
| Tolerance mm | : ← 0.05 | - cm3/1000s. : +- 4.0 |
| | | 1 |
| EASUREMENT | | |
| | | + BREAKAWAY |
| Pressure hPa | ; - | + |
| Rated speed rpm | : 900_ | + |
| rack travel mm | : 7.70 | + Rack travel in mm : 11.70 |
| | | • |

Rated speed rpm : 1145 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity cm3/1000 strokes : 140.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : \leftarrow 19.0

LOW IDLE

Rated speed rpm : 275
rack travel mm : 5.50
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 26.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0

Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

| | 1 | |
|---|-------------------------------------|--|
| BOSCH INJ. PUMP T | TEST SPECIFICATIONS | x inside diameter: 2.0 x length mm : 600 |
| Note remarks | | . Congert Hair . Goo |
| Refer to Service adjustment instru See microcard(s) | | REMARKS |
| Edition Test oil | : 15.12.94 : ISO 4113 | |
| Combination No. | : 0402846054 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Injection pump Pump designation EP type number | : PE6P120A320RS8017 : 0412826018 | BEGINNING OF DELIVERY |
| Governor Governer design. | : RQV3001100PA1017 | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Governer no. | ‡ | Prestroke mm : 4.15 Tolerance mm : + 0.05 |
| Cust. part No. | : 865811-P02 | test only : +- 0.10 |
| Customer-spec. in Customer Motor Power KW | : PENTA + | Rack travel in mm: 10.50 Tolerance mm: +- 1.50 Firing order: 1-5-3-6-2- : 4 |
| TEST BENCH REQUIR | EMENTS + | Phasing : 0-60-120-180-240 |
| Test oil inlet temp. °C Tolerance °C | : 40 : +- 2.0 | : -300 Tolerance : +- 0.30 Check tolerance °NW : +- 0.75 |
| Overflow valve | : 2417413078 | BEGINNING OF DELIVERY DIFFERENCE |
| Inlet press. bar Tolerance bar | : 2.5 : + 0.1 | Time to cyl. no. : 1 |
| Test nozzle holde assembly | | BASIC SETTING Rated speed rpm : 750 |
| Opening pressure bar Tolerance bar | : 208.5 : + 1.5 | Rack travel in mm : 11.05 Tolerance mm : + 0.05 |
| Test lines | : 1680750008 | Del. quantity |
| Outside diameter | : 6.0 | cm3/1000 strokes : 205.0 |

| Tolerance cm3/1000 strokes : +- 1.0 | - control lever - position degree : - 1 |
|---|--|
| Check tolerance cm3/1000S. : +- 4.0 | - Rated speed rpm : 1250 |
| Spreed Tolerance cm3/1000 strokes : 6.0 | - Rack travel in mm : 10.00 - Tolerance mm : +- 2.00 - |
| Check tolerance cm3/1000s. : 10.0 | - FULL LOAD DELIVERY AT FULL LOAD STOP - Rated speed rpm : 750 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | - Aneroid pressure - hPa : 1200 - Del. quantity - cm3/1000 strokes : 205.0 - Tolerance |
| GUIDE SLEEVE TRAVEL | - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000S. : + 4.0 |
| Rated speed rpm : 300 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1137 | Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 |
| guide sleeve travel mm : 8.19 Tolerance mm : + 0.25 | - RATED SPEED |
| Rated speed rpm : 816 guide sleeve travel mm : 5.27 Tolerance mm : + 0.25 | control lever position degree : 58.0 tolerance degree : +- 4.0 |
| Rated speed rpm : 385 guide sleeve travel mm : 1.98 Tolerance mm : + 0.25 | control lever position degree : 114.0 tolerance degree : +- 4.0 rack travel mm : 10.05 |
| Rated speed rpm : 435 | Rated speed rpm : 1125 Tolerance 1/min : +- 5 |
| guide sleeve travel mm : 2.45 Tolerance mm : +- 0.25 | rack travel mm : 4.00 Rated speed rpm : 1210 Tolerance 1/min : +- 15 |
| Rated speed rpm : 530 guide sleeve travel mm : 3.11 Tolerance mm : +- 0.25 | rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1320 |
| Rated speed rpm : 1400 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 | LOW IDLE |
| GUIDE SLEEVE POSITION | control lever position degree : 80.0 tolerance degree : +- 4.0 |
| ‡ | control lever position degree : 15.0 |

tolerance degree : +- 4.0

Testing:

Rated speed rpm : 300 rack travel mm : 4.30 Tolerance mm : + 0.30

Rated speed rpm : 100

CRT mm min. :> 6.00

CONTINUOUS-ACTION CONTROL

Rated speed rpm : 330

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 11.05
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 7.80
Tolerance mm : + 0.10

Rated speed rpm : 500

Pressure hPa : 780 rack travel mm : 2.90 Tolerance mm : + 0.10

Pressure hPa : 310 rack travel mm : 0.25 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 132.0 Tolerance

cm3/1000 strokes : +-

Check tolerance

cm3/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 10.05 Rated speed rpm : 1125 Tolerance 1/min : +- 5

| BOSCH INJ. PUMP TEST SPECIFICATIONS | x inside diameter: 2.0 |
|---|---|
| Note remarks | x length mm : 600 |
| Refer to Service Info for test and adjustment instructions. See microcard(s) W400/ | REMARKS |
| Edition : 16.12.94 Test oil : ISO 4113 | |
| Combination No. : 0402946011 | . (A) TALLECTION DUMD CETTIALS VALUES |
| Injection pump Pump designation : PES6P120A320RS8028 EP type number : 0412926021 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Governor Governer design.: RQV2751250PA1125K Governer no.: 0421815981 | BEGINNING OF DELIVERY Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Cust. part No. : CCEP 5140A 66-205 | Prestroke mm : 4.95 Tolerance mm : + 0.05 |
| Customer—spec. information Customer : RVI Motor : MIDR 06.02.26L51 Power KW : 132.0 | test only : + 0.10 Rack travel in mm : 11.00 Tolerance mm : + 0.50 |
| TEST BENCH REQUIREMENTS | Firing order : 1-5-3-6-2- : 4 |
| Test oil inlet temp. °C : 40 + 70 + 70 + 70 + 70 + 70 + 70 + 70 + | Phasing : 0-60-120-180-240 : -300 Tolerance : +- 0.30 Check tolerance °NW : +- 0.50 |
| Overitow valve : 241/4/50/6 | toterance NW : += 0.50 |
| Inlet press. bar : 2.5 | BEGINNING OF DELIVERY DIFFERENCE |
| Test nozzle holde assembly : 1688901101 | betw. rack trav. mm : 10.00 and maximum rack travel : 21.00 |
| Opening pressure bar : 208.5 Tolerance bar : + 1.5 | travel : 21.00 Difference ° CS : 2.25 Tolerance : + 0.75 |
| Lube oil : 1409918004 | Time to cyl. no. : 1 |
| Test Lines : 1680750008 | DARIC CETTING |
| Outside diameter : 6.0 | BASIC SETTING |

| Rated speed rpm | : 1250 | Rated speed rpm : 390 guide sleeve |
|--|----------------------|--|
| Rack travel in mm Tolerance mm | | travel mm : 2.39 Tolerance mm : +- 0.20 |
| Del. quantity cm3/1000 strokes | : 169.0 | _ + Rated speed rpm : 440 + guide sleeve + travel mm : 3.01 |
| Tolerance cm3/1000 strokes | : + 1.0 | _ + Tolerance mm : + 0.20 + Rated speed rpm : 550 |
| Check tolerance cm3/1000s. | : + 4.0 | _ + guide sleeve + travel mm : 3.92 + Tolerance mm : + 0.20 |
| Spreed Tolerance | | Rated speed rpm : 1650 guide sleeve |
| cm3/1000 strokes Check tolerance | : 5.0 | travel mm : 13.50 Tolerance mm : + 0.50 |
| cm3/1000s. | | GUIDE SLEEVE POSITION |
| 2nd speed rpm | : 325 | ‡ |
| Rack travel in mm Tolerance mm Del. quantity | : +- 0.20 | control lever position degree : - 1 Rated speed rpm : 1430 |
| cm3/1000 strokes Tolerance cm3/1000 strokes | | Rack travel in mm : 10.90 Tolerance mm : +- 2.00 |
| Check tolerance cm3/1000S. Spreed | : ← 6.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Tolerance cm3/1000 strokes Check tolerance | | Rated speed rpm : 1250 Aneroid pressure |
| cm3/1000s. | : 12.0 | + hPa : 1600 + Del. quantity + cm3/1000 strokes : 169.0 |
| (B) SETTING OF INJ WITH GOVERNOR | ECTION PUMP | + Tolerance + cm3/1000 strokes : +- 1.0 |
| GUIDE SLEEVE TRAVE | L | Check tolerance cm3/1000s. : +- 4.0 Spreed |
| guide sleeve | : 275 | Tolerance cm3/1000 strokes : 5.0 Check tolerance |
| travel mm Tolerance mm | : 1.00 : + 0.15 | cm3/1000s. : 9.0 |
| guide sleeve | : 1355 | RATED SPEED |
| travel mm Tolerance mm | : 10.10 : + 0.10 | t control lever position degree : 296.0 |
| guide sleeve | : 929 | tolerance degree : + 4.0 |
| travel mm Tolerance mm | : 6.80 : + 0.20 | + rack travel mm : -1.00 + Rated speed rpm : 1335 + Tolerance 1/min : +- 5 |

| | 1 | rack travel mm : -4.20 |
|---|--------------------------|--|
| rack travel mm Rated speed rpm | : -8.60 : 1460 | Tolerance mm : +- 0.20 |
| Tolerance 1/min | : +- 15 | Rated speed rpm : 1250 |
| rack travel mm | : -12.10 | Pressure hPa : 200 |
| Tolerance mm Rated speed rpm | 1600 | Pressure hPa : 200 rack travel mm : -3.60 Tolerance mm : ← 0.20 |
| 1 OH 7 OH F | T | Pressure hPa : 360 |
| LOW IDLE | ‡ | Pressure hPa : 360 rack travel mm : -2.50 Tolerance mm : +- 0.05 |
| control lever | . 2// 0 | CTART CUT OUT |
| position degree tolerance degree | | START CUT-OUT |
| Testing: | ‡ | Rated speed rpm : > 150 Check |
| Rated speed rpm | : 325 | speed 1/min : > 130 Rated speed rpm : < 215 |
| rack travel mm Tolerance mm | : -6.60 | Check |
| | + | speed 1/min : < 235 |
| Rated speed rpm | + | FUEL DELIVERY CHARACTERISTICS |
| CRT mm max. | - | Aneroid pressure |
| CONTINUOUS-ACTION | CONTROL | hPa : 1600 Rated speed rpm : 650 |
| | | Del. quantity cm3/1000 strokes : 181.0 |
| Rated speed rpm | : 360 : 1250 : 650 | cm3/1000 strokes : 181.0 Tolerance |
| TORQUE CONTROL | | cm3/1000 strokes : +- 3.0 |
| | Ŧ | Check tolerance cm3/1000S. : +- 6.0 |
| Rated speed rpm | : 1250 + | Aneroid pressure |
| Rated speed rpm | : 650 | hPa : - |
| rack travel mm Tolerance mm | ÷ =1.10 + | Rated speed rpm : 500 Del. quantity |
| Rated speed rpm | : 350 | cm3/1000 strokes : 118.0 Tolerance |
| rack travel mm Tolerance mm | : -1.70 | cm3/1000 strokes : + 1.0 |
| roterance mm | : + 0.0 | Check tolerance cm3/1000S. : +- 4.0 |
| ANEROID/ALTITUDE | + | DDFAKALAN |
| COMPENSATOR TEST | ‡ | BREAKAWAY |
| SETTING | ‡ | Rack travel in mm : -1.00 Rated speed rpm : 1335 |
| Rated speed rpm | : 1250 | Rated speed rpm : 1335 Tolerance 1/min : +- 5 |
| Rated speed rpm Pressure hPa Tolerance mm | : 1600 : + 0.10 | |
| MEASUREMENT | ‡ | STARTING FUEL DELIVERY |
| Pressure hPa | : - ‡ | Del. quantity |
| Rated speed rpm | : 500 | cm3/1000 strokes : 122.0 |

Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : -6.60
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 40.0
Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 16,12,94

Test oil

: ISO 4113

Combination No. : 0402946013

Injection pump

Pump designation : PES6P120A320RS8028

EP type number

: 0412926021

Governor

Governer design. : RQV275...1250PA1189K

Governer no.

: 0421815974

Cust. part No. : CCEP 5146 66-220

Customer-spec. information

Customer

: RVI

Motor

: MIDR 06.02.26Y41

Power KW

: 184.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 2417413078

Inlet press. bar :

2.5

Test nozzle holde assembly

: 1688901105

Opening pressure

208.5

Tolerance bar

: **←** 1.5

Lube oil

: 1409918004

Test lines

: 1680750089

Outside diameter :

8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar 1.0

4.95 Prestroke mm : + - 0.05Tolerance mm

test only : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : **←** 0.30 Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm

1250

Rack travel in mm : 14,40 Tolerance mm

: **←** 0.05

| Del. quantity cm3/1000 strokes : 277.0 | guide sleeve travel mm : 3.16 Tolerance mm : +- 0.25 |
|--|--|
| Tolerance cm3/1000 strokes : + 1.0 | Rated speed rpm : 550 |
| Check tolerance cm3/1000s. : +- 4.0 | guide sleeve travel mm : 3.97 Tolerance mm : +- 0.25 |
| Spreed Tolerance | Rated speed rpm : 1630 guide sleeve |
| cm3/1000 strokes : 5.0 | travel mm : 13.50 Tolerance mm : +- 0.50 |
| Check tolerance cm3/1000s. : 9.0 | GUIDE SLEEVE POSITION |
| 2nd speed rpm : 275 | SELECT COLUMN |
| Rack travel in mm: -7.90 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 36.0 | control lever position degree : - 1 Rated speed rpm : 1420 |
| Tolerance + 2.0 + Check tolerance + | Rack travel in mm : 13.50 Tolerance mm : +- 1.50 |
| cm3/1000S. : +- 6.0 +- Spreed | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Tolerance + cm3/1000 strokes : 8.0 + Check tolerance | Rated speed rpm : 1250 Aneroid pressure |
| cm3/1000s. : 12.0 | hPa : 1600 Del. quantity |
| (B) SETTING OF INJECTION PUMP | cm3/1000 strokes : 277.0 Tolerance |
| WITH GOVERNOR | cm3/1000 strokes : +- 1.0 Check tolerance |
| GUIDE SLEEVE TRAVEL | cm3/1000s. : +- 4.0 Spreed |
| Rated speed rpm : 275 | Tolerance cm3/1000 strokeš : 5.0 Check tolerance |
| travel mm : 1.10 Tolerance mm : + 0.25 | cm3/1000s. : 9.0 |
| Rated speed rpm : 1332 guide sleeve | RATED SPEED |
| travel mm : 10.07 Tolerance mm : + 0.25 | control lever |
| Rated speed rpm : 912 guide sleeve | position degree : 299.0 tolerance degree : +- 4.0 |
| travel mm : 6.79 Tolerance mm : + 0.25 | rack travel mm : -1.00 Rated speed rpm : 1320 Tolerance 1/min : +- 5 |
| Rated speed rpm : 412 guide sleeve | Tolerance 1/min : +- 5 rack travel mm : -10.40 |
| travel mm : 2.53 Tolerance mm : + 0.25 | Rated speed rpm : 1475 Tolerance 1/min : +- 15 |
| Rated speed rpm : 462 | rack travel mm : -13.90 |
| cus | |

GOS

| Tolerance mm Rated speed rpm | : +- 0.50 : 1600 | ‡ | rack travel mm Tolerance mm | : +- 0.20 |
|--|---|---------------|--|-------------------------------|
| LOW IDLE | *************************************** | | Pressure hPa rack travel mm Tolerance mm | : 560 : -2.70 : +- 0.05 |
| control lever position degree tolerance degree | : 254.0 : +- 4.0 | T | START CUT-OUT | 470 |
| Testing: | | ‡ | Rated speed rpm Check | |
| Rated speed rpm rack travel mm Tolerance mm | : 275 : -7.90 : +- 0.10 | ‡ | speed 1/min Rated speed rpm Check speed 1/min | : > 110 : < 225 : < 245 |
| Rated speed rpm | : 200 | Ŧ | | |
| CRT mm max. | : < -7.10 | ‡ | FUEL DELIVERY CHA | RACTERISTICS |
| | | + | Aneroid pressure | 4/00 |
| CONTINUOUS-ACTION | N CONTROL | ‡ | hPa Rated speed rpm | : 1600 : 650 |
| Rated speed rpm | . 380 | + | Del. quantity cm3/1000 strokes | |
| nateu speeu ruii | . 500 | Į | Tolerance | |
| TORQUE CONTROL | | | cm3/1000 strokes Check tolerance | : + 3.0 |
| | 4250 | + | cm3/1000s. | : ← 6.0 |
| Rated speed rpm | : 1250 | ‡ | Aneroid pressure | |
| Rated speed rpm | : 650 | + | hPa | : ~ |
| rack trayel mm Tolerance mm | : -1.10 : +- 0.10 | # | Rated speed rpm Del. quantity | : 500 |
| | | + | cm3/1000 strokes | : 197.0 |
| Rated speed rpm rack travel mm | : 35U · -2.80 | 1 | Tolerance cm3/1000 strokes | · +- 1 n |
| Tolerance mm | : + 0.25 | + | Check tolerance | |
| | | <u> </u> | cm3/1000s. | : +- 4.0 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | - | BREAKAWAY | |
| SETTING | | 1 | Rack travel in mm | : -1.00 |
| | . 4250 | + | Rated speed rpm | : 1320 |
| Rated speed rpm Pressure hPa Tolerance mm | : 1250 : 1600 : ← 0.10 | + | Tolerance 1/min | : +- 5 |
| MEASUREMENT | | ‡ | STARTING FUEL DELI | LVERY |
| Pressure hPa Rated speed rpm rack travel mm | : -4.50 | † † † | Del. quantity cm3/1000 strokes Tolerance | |
| Toterance mm | : +- 0.20 | ‡ | cm3/1000 strokes Check tolerance | : ← 15.0 |
| Rated speed rpm | : 1250 | + | cm3/1000S. | : +- 19.0 |
| Pressure hPa | : 410 | + | | |

| t | WO. | ID | |
|---|-----|----|--|
| L | UW. | 10 | |

| Rated speed rpm rack travel mm Tolerance mm | : +- | 275 -7.90 0.20 |
|---|------|----------------------|
| Del. quantity cm3/1000 strokes | : | 36.0 |
| Tolerance cm3/1000 strokes | . 1_ | 2.0 |
| Check tolerance | ; - | 2.0 |
| cm3/1000s. | : +- | 6.0 |
| Spreed Tolerance | | |
| cm3/1000 strokes | : | 8.0 |
| Check tolerance cm3/1000s. | : | 12.0 |

| Refer to Service Info for test and adjustment instructions. See microcard(s) W400/ Edition | Note remarks | | x inside diameter: 3.0 x length mm : 600 |
|--|------------------------------------|--------------------------|---|
| See microcard(s) W400/ Edition | WOLE TENDERS | | I |
| Set equal delivery quant. per values p | adjustment instru | ctions. | REMARKS |
| Combination No. : 0403244043 per values | Edition Test oil | : 21.12.94 : ISO 4113 | (A) INJECTION PUMP SETTING VALUES |
| ### Pump designation : PES4MW100/720RS1519 | Combination No. | : 0403244043 | per values |
| ## Type number : 0413204017 | Injection pump Pump designation | | BEGINNING OF DELIVERY |
| Prestroke mm | | | |
| test only : + 0.10 Rack travel in mm : 21.00 Firing order : 1-3-4-2 Customer-spec. information Customer : MB-NFZ Motor : 0M364LA Power KW : 103.0 TEST BENCH REQUIREMENTS Test oil inlet Temp. °C : 40 Tolerance °C : + 2.0 Coverflow valve : 1419992198 Inlet press. bar : 1.5 Test nozzle holde Test nozzle nozzle nozzle Test nozzle nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozzle Test nozz | Governer design. | : -6 | Prestroke mm : 4.55 |
| Rack travel in mm : 21.00 | soverner no. | : U420005309 | - |
| Firing order : 1- 3- 4- 2 | Cust. part No. | : 0240744102 | + |
| Customer | | | Firing order : 1-3-4-2 |
| TEST BENCH REQUIREMENTS Check tolerance "NW : + 0.75 Test oil inlet temp. "C : 40 Tolerance "C : + 2.0 Example Tolerance "C : + 2.0 Rated speed rpm : 1300 Example Tolerance remp. : 13.90 Tolerance remp. : + 0.05 Example Tolerance remp. : + 0.05 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Example Tolerance remp. : + 1.0 Example Tolerance remp. : - 1.5 Tolerance cm3/1000 strokes : + 1.0 Example Tolerance remp. : - 1.5 Example Tolerance remp. : - 1.5 Tolerance remp. : - 1.5 Example | Customer Motor | : MB-NFZ : OM364LA | |
| BASIC SETTING Rated speed rpm : 1300 | | | - Check |
| Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rack travel in mm : 13.90 Tolerance mm : + 0.05 Pel. quantity cm3/1000 strokes : 126.0 Check tolerance cm3/1000s. : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Tolerance cm3 | IEZI BENCH KEGOTK | -MEN12 - | tolerance NW : +- U.75 |
| Rated speed rpm : 1300 | temp. °C | | BASIC SETTING |
| Rack travel in mm : 13.90 Tolerance mm : + 0.05 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 4.0 | occi ance | - | Rated speed rpm : 1300 |
| Del. quantity Cm3/1000 strokes : 126.0 Tolerance Cm3/1000 strokes : 126.0 Tolerance Cm3/1000 strokes : + 1.0 Check tolerance Cm3/1000s. : + 4.0 Spreed Tolerance Cm3/1000 strokes : 4.0 Tolerance Cm3/1000 strokes Cm3/1000 strokes Cm3/1000 str | Overflow valve | : 1419992198 | |
| Test nozzle holde assembly : 1688901101 | · | : 1.5 | Del. quantity |
| Check tolerance | | : 1688901101 | - Tolerance |
| Spreed | ar | | - Check tolerance |
| rest lines : 1680750089 | ocerance bar | . 1 ° 10 | |
| | est lines | : 1680750089 | - Tolerance |
| | Outside diameter | : 8.0 | |

| Check tolerance cm3/1000s. | : 7.5 | + Tolerance mm : + 0.50 |
|--|---|---|
| Del. quantity cm3/1000 strokes | : 12.0 | GUIDE SLEEVE POSITION |
| Tolerance cm3/1000 strokes Check tolerance | : +- 2.0 | control lever position degree : - 1 |
| cm3/1000s. Spreed | : +- 4.5 | Rated speed rpm : 1510 |
| Tolerance cm3/1000 strokes | : 3.5 | Rack travel in mm : 16.50 Tolerance mm : + 1.30 |
| Check tolerance cm3/1000s. | : 5.5 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| (B) SETTING OF IN | NJECTION PUMP | + Rated speed rpm : 1300 |
| WITH GOVERNOR | *************************************** | Aneroid pressure hPa : 1200 Del. quantity |
| GUIDE SLEEVE TRAN | | - cm3/1000 strokes : 126.0 - Tolerance |
| Rated speed rpm guide sleeve | | cm3/1000 strokes : + 1.0 Check tolerance |
| travel mm Tolerance mm | : 0.91 : ← 0.25 | + cm3/1000S. : + 4.0 + Spreed + Tolerance |
| Rated speed rpm guide sleeve | : 1354 | cm3/1000 strokes : 4.0 Check tolerance |
| travel mm Tolerance mm | : 7.77 : ← 0.25 | cm3/1000s. : 7.5 |
| Rated speed rpm guide sleeve | : 1140 | RATED SPEED |
| travel mm Tolerance mm | : 5.88 : +- 0.25 | control lever |
| Rated speed rpm | : 629 | position degree : 114.0 tolerance degree : + 4.0 |
| guide sleeve travel mm Tolerance mm | : 3.15 : + 0.25 | rack travel mm : 12.90 Rated speed rpm : 1345 |
| Rated speed rpm | | Tolerance 1/min : +- 5 |
| guide sleeve travel mm | : 3.53 | rack travel mm : 4.00 Rated speed rpm : 1465 |
| Tolerance mm Rated speed rpm | : +- 0.25 : 800 | Tolerance 1/min : + 15 + rack travel mm : 0.50 |
| guide sleeve travel mm | : 4.00 | Tolerance mm : + 0.50 Rated speed rpm : 1550 |
| Tolerance mm | : +- 0.25 | <u> </u> |
| Rated speed rpm guide sleeve | : 1596 | + LOW IDLE |
| travel mm Tolerance mm | : 12.00 : +- 0.25 | control lever position degree : 72.0 |
| Rated speed rpm guide steeve | : 1690 | tolerance degree : +- 4.0 |
| travel mm | : 13.50 | + Testing: |

| Rated speed rpm rack travel mm Tolerance mm | : 3.90 | Check speed 1/min : < 220 |
|---|-------------------------------|---|
| Rated speed rpm | | FUEL DELIVERY CHARACTERISTICS |
| · | : > 4.50 | Aneroid pressure hPa : 1200 Rated speed rpm : 750 |
| TORQUE CONTROL | | - † Del. quantity + cm3/1000 strokes : 124.0 + Tolerance |
| Rated speed rpm rack travel mm Tolerance mm | : 13.90 | - cm3/1000 strokes : +- 2.0 - Check tolerance - cm3/1000s. : +- 5.0 |
| Rated speed rpm rack travel mm | : 750 | Spreed Tolerance cm3/1000 strokes : 6.0 |
| Tolerance mm | : +- 0.10 | + Check tolerance + cm3/1000s. : 9.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 600 : 13.90 : +- 0.10 | Aneroid pressure hPa : 1200 Rated speed rpm : 600 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | - + Del. quantity + cm3/1000 strokes : 126.0 + Tolerance + cm3/1000 strokes : +- 2.0 |
| SETTING | | + Check tolerance + cm3/1000s. : ← 5.0 |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1200 | Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 67.0 |
| MEASUREMENT | | + Tolerance + cm3/1000 strokes : +- 1.0 |
| Pressure hPa Rated speed rpm Tolerance mm | : - : 500 : +- 0.10 | Check tolerance cm3/1000s. : +- 3.0 |
| Rated speed rpm | : 500 | BREAKAWAY |
| Pressure hPa rack travel mm Tolerance mm | : 600 : 2.00 : +- 0.10 | Rack travel in mm : 12.90 Rated speed rpm : 1345 Tolerance 1/mir : + 5 |
| Pressure hPa rack travel mm Tolerance mm | : 0.50 | <u> </u> |
| START CUT-OUT | | STARTING FUEL DELIVERY Rated speed rpm : 100 |
| Rated speed rpm | : > 100 | + Del. quantity + cm3/1000 strokes : 150.0 |
| Check speed 1/min Rated speed rpm | : > 80 : < 200 | Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 |

LOW IDLE

Del. quantity cm3/1900 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

BOSCH INJ. FUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0403246039

Injection pump

Pump designation : PES6MW100/720RS1517

: -3

EP type number : 0413206020

Governor

Governer design. : RQV300...1300MW145

Governer no. : 0420083317

Cust. part No. : 0250745402

Customer-spec. information Customer : MB-NFZ

Motor : 0M366LA Power KW : 125.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm: 21.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.25 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 96.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed

| Tolerance | | + Rated speed rpm : 1780 |
|--|----------------------|--|
| cm3/1000 strokes | : 3.5 | guide sleeve |
| | | ‡ travel mm : 13.50 |
| Check tolerance | | → Tolerance mm : ← 0.50 |
| cm3/1000s. | : 6.0 | + |
| Nat mantitu | | CUIDE CLEENE POOTTION |
| Del. quantity cm3/1000 strokes | : 12.0 | GUIDE SLEEVE POSITION |
| Tolerance | . 12.0 | Rated speed rpm : 1500 |
| cm3/1000 strokes | : - 2.0 | Rated speed (pii) . 1505 |
| Check tolerance | | Rack travel in mm: 10.00 |
| cm3/1000s. | : +- 4.5 | + Tolerance mm : + 2.00 |
| <u>Spreed</u> | | † |
| Tolerance | ~p. p | |
| cm3/1000 strokes | : 3.5 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Check tolerance cm3/1000s. | : 5.5 | Rated speed rpm : 1300 |
| Ch57 10003. | .).) | Aneroid pressure |
| | | + hPa : 1000 |
| (B) SETTING OF IN. | JECTION PUMP | + Del. quantity |
| WITH GOVERNOR | | + cm3/1000 strokes : 96.0 |
| | | + Tolerance |
| CHINE CLEENE TOAM | | + cm3/1000 strokes : + 1.0 |
| GUIDE SLEEVE TRAVE | CL . | + Check tolerance + cm3/1000s. : + 3.0 |
| Rated speed rpm | : 300 | + Spreed |
| guide sleeve | . 355 | + Tolerance |
| travel mm | : 1.02 | + cm3/1000 strokes : 3.5 |
| Tolerance mm | : +- 0.25 | - Check tolerance |
| ~ | 4 12 000 | + cm3/1000s. : 6.0 |
| Rated speed rpm | : 1353 | † |
| guide sleeve travel mm | : 6.70 | DATED COEFD |
| Tolerance mm | : + 0.25 | RATED SPEED |
| TOTEL ALICE IIII | 0.23 | Ţ |
| Rated speed rpm | : 1090 | + control lever |
| guide sleeve | | + position degree : 100.0 |
| travel mm | : 4.70 | tolerance degree : + 4.0 |
| Tolerance mm | : + 0.25 | 10.00 |
| Dated speed spm | : 490 | + rack travel mm : 10.20 + Rated speed rpm : 1345 |
| Rated speed rpm guide sleeve | : 490 | + Rated speed rpm : 1345 + Tolerance 1/min : +- 5 |
| travel mm | : 2.25 | Total and Infinite |
| Tolerance mm | : +- 0.25 | rack travel mm : 4.00 |
| | | rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15 |
| Rated speed rpm | : 540 | + Tolerance 1/min : +- 15 |
| guide sleeve | . 2.5/ | t and though an 0.50 |
| travel mm Tolerance mm | : 2.54 : + 0.25 | + rack travel mm : 0.50 + Tolerance mm : + 0.50 |
| roterance min | . +- 0.25 | Tolerance mm : +- 0.50 Rated speed rpm : 1550 |
| Rated speed rpm | : 690 | Marea speed (pill . 1990 |
| guide sleeve | | |
| travel mm | : 2.97 | + LOW IDLE |
| Tolerance mm | : + 0.25 | + |
| Dakad amazi | . 1/97 | † ambust tours |
| Rated speed rpm guide sleeve | : 1683 | + control lever + position degree : 55.0 |
| travel mm | : 12.00 | + position degree : 55.0 + tolerance degree : + 4.0 |
| Tolerance mm | | total and degree . 1 4.0 |
| THE STATE OF THE S | | + Testing: |
| | | 1 |

| | | + Check |
|---|-------------------------------|---|
| Rated speed rpm rack travel mm Tolerance mm | : 300 : 3.50 : +- 0.10 | speed 1/min : < 240 |
| Rated speed rpm | | FUEL DELIVERY CHARACTERISTICS |
| CRT mm min. | : > 4.20 | + Aneroid pressure + hPa : 1000 + Rated speed rpm : 750 |
| TORQUE CONTROL | | — |
| Rated speed rpm rack travel mm Tolerance mm | : 1300 : 11.25 : ← 0.05 | Tolerance - cm3/1000 strokes : +- 1.5 - Check tolerance - cm3/1000s. : +- 4.0 |
| Rated speed rpm | | + Spreed + Tolerance |
| rack travel mm Tolerance mm | : 11.25 : +- 0.10 | + cm3/1000 strokes : 5.5 + Check tolerance |
| Rated speed rpm rack travel mm Tolerance mm | : 11.25 | - cm3/1000s. : 7.0 - Aneroid pressure - hPa : 1000 - Rated speed rpm : 600 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | Del. quantity cm3/1000 strokes : 88.0 Tolerance |
| SETTING | | + cm3/1000 strokes : +- 1.5 + Check tolerance + cm3/1000s. : +- 4.0 |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1000 : 11.25 | Aneroid pressure hPa : 1000 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 88.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 57.0 Tolerance cm3/1000 strokes : 57.0 |
| Pressure hPa Rated speed rpm Tolerance mm | : - : 500 : + 0.10 | - cm3/1000 strokes : +- 1.0 - Check tolerance - cm3/1000s. : +- 3.0 |
| Rated speed rpm | : 500 | BREAKAWAY |
| Pressure hPa rack travel mm Tolerance mm | : 350 : 1.15 : + 0.10 | Rack travel in mm: 10.20 Rated speed rpm: 1345 Tolerance 1/min: +- 5 |
| Pressure hPa rack travel mm Tolerance mm | : 250 : 0.45 : + 0.10 | |
| | | - STARTING FUEL DELIVERY |
| START CUT-OUT | . 400 | Rated speed rpm : 100 - Del. quantity |
| Rated speed rpm Check speed 1/min | | + cm3/1000 strokes : 160.0 + Tolerance + cm3/1000 strokes : +- 5.0 |
| speed 1/min Rated speed rpm | : < 220 | + Check tolerance + cm3/1000s. : +- 8.0 |

LOW IDLE

Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

| BOSCH INJ. PUMP TEST SPECIFICATIONS | x inside diameter: 2.0 x length mm : 600 |
|---|---|
| Note remarks | |
| Refer to Service Info for test and adjustment instructions. See microcard(s) W400/ | REMARKS |
| Edition : 21.12.94 Test oil : ISO 4113 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. |
| Combination No. : 0403486106 | per values |
| Injection pump Pump designation : PES6MW100/321RS1232 EP type number : 0413406226 | + |
| Governor Governer design. : RSV3001150MW0A343 | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| Governer no. : 0420085210 | Prestroke mm : 3.55 Tolerance mm : + 0.05 |
| Cust. part No. : 3-7262 | test only : +- 0.10 |
| Cuptowan_apaa_information | Rack travel in mm : 10.50 Tolerance mm : + 1.50 |
| Customer—spec. information Customer : MAN Motor : D0826LE 523 Power KW : 154.0 | Firing order : 1-5-3-6-2- : 4 |
| TEST BENCH REQUIREMENTS | + Phasing : 0-60-120-180-240 : -300 |
| Test oil inlet temp. °C : 40 Tolerance °C : +- 2.0 | Tolerance : + 0.50 Check tolerance *NW : + 0.75 |
| Overflow valve : 1417413047 | BEGINNING OF DELIVERY DIFFERENCE |
| Inlet press. bar : 1.5 | Time to cyl. no. : 1 S.o.d. blocking Barrel no. : 1 |
| Test nozzle holde assembly : 0681343009 | BASIC SETTING |
| Opening pressure : 173.5 Tolerance bar : +- 1.5 | Rated speed rpm : 1125 |
| Test lines : 1680750008 | Rack travel in mm : 13.15 Tolerance mm : +- 0.05 |
| Outside diameter : 6.0 | Del. quantity cm3/1000 strokes : 163.0 |
| | |

| Tolerance cm3/1000 strokes : + 1.0 | Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 |
|---|--|
| Check tolerance cm3/1000s. : ← 4.0 | DATEN ODEEN |
| Spreed Tolerance cm3/1000 strokes : 4.0 | RATED SPEED control lever |
| Check tolerance cm3/1000s. : 7.5 | position degree : 104.0 tolerance degree : +- 4.0 |
| Del. quantity cm3/1000 strokes : 15.0 | rack travel mm : 12.15 Rated speed rpm : 1180 Tolerance 1/min : +- 5 |
| Tolerance + 2.0 + Check tolerance + + + + + + + + + + + + + + + + + + + | rack travel mm : 4.00 Rated speed rpm : 1280 |
| cm3/1000s. : +- 4.5 Spreed Toterance | Tolerance 1/min : +- 15 rack travel mm : 1.00 |
| cm3/1000 strokes : 3.5 + Check tolerance cm3/1000s. : 5.5 + | Tolerance mm : +- 0.70 Rated speed rpm : 1400 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | LOW IDLE control lever position degree : 77.0 |
| GUIDE SLEEVE POSITION | tolerance degree : +- 4.0 Testing: |
| control lever position degree : -3 Rated speed rpm : 800 | Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : +- 0.10 |
| Rack travel in mm : 0.65 Tolerance mm : + 0.35 | rack travel mm : 2.00 |
| governor spring pre-tension click setting x : 5.50 | Rated speed rpm : 100 CRT mm min. : > 19.00 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | TORQUE CONTROL |
| Rated speed rpm : 1125 Aneroid pressure hPa : 1200 | Rated speed rpm : 1125 rack travel mm : 13.15 Tolerance mm : +- 0.05 |
| Del. quantity cm3/1000 strokes : 163.0 + Tolerance + | Rated speed rpm : 925 rack travel mm : 13.50 Tolerance mm : + 0.10 |
| cm3/1000 strokes : + 1.0 | Rated speed rpm : 600 rack travel mm : 13.50 Tolerance mm : + 0.10 |
| | |

| ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1200 rack travel mm : 13.50 Tolerance mm : + 0.10 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 rack travel mm : 9.45 Tolerance mm : + 0.05 | Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 BREAKAWAY Rack travel in mm : 12.15 Rated speed rpm : 1180 Tolerance 1/min : +- 5 |
|--|--|
| Rated speed rpm : 500 Pressure hPa : 750 rack travel mm : 12.35 Tolerance mm : + 0.15 | STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 145.0 |
| Pressure hPa : 150 rack travel mm : 9.75 Tolerance mm : + 0.05 | Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 |
| FUEL DELIVERY CHARACTERISTICS | 1011 7015 |
| Aneroid pressure hPa : 1200 Rated speed rpm : 925 Del. quantity cm3/1000 strokes : 165.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strökes : 6.0 Check tolerance cm3/1000s. : 9.0 Aneroid pressure hPa : 1200 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance | Del. quantity cm3/1000 strokes: 15.0 Tolerance cm3/1000 strokes: + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes: 3.5 Check tolerance cm3/1000s. : 5.5 |
| Check tolerance cm3/1000s. : +- 5.0 | ‡ |

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 18.03.94 Test oil : ISO 4113 Combination No. : 0401846900 Injection pump Pump designation : PE6P120A320RS3240 EP type number : 0411826786 Governor Governer design. : RQV250...1025PA921 : -16 Governer no. : 0421813799 Cust. part No. : 478378-P02 Customer-spec. information Customer : VOLVO-TRUCK Motor : TD122FL Power KW : 298.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 : 2457413046 Overflow valve Inlet press. bar Tolerance bar Test nozzle holde : 1688901019 assembly Opening pressure 208.5 Tolerance bar 1.5 Test lines : 1680750075

Outside diameter :

G16

8.0

```
x inside diameter :
                        3.0
x length mm :
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : +-
Prestroke mm
                       2.85
Tolerance mm
test only
                 : + 0.10
Rack travel in mm: 10.50
Tolerance mm
                : +- 1.50
Firing order
                 : 1-5-3-6-2-
                 : 0-60-120-180-240
Phasing
                 : -300
Tolerance
                 : +- 0.30
Check
                 : + 0.75
tolerance °NW
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
                     700
Rated speed rpm
Rack travel in mm :
                     13.65
Tolerance mm
```

| 1 | |
|--|--|
| Del. quantity cm3/1000 strokes : 252.0 | control lever position degree : 120.0 tolerance degree : +- 4.0 |
| Tolerance cm3/1000 strokes : + 1.0 | rack travel mm : 12.65 Rated speed rpm : 1070 |
| Check tolerance cm3/1000s. : + 4.0 | Tolerance 1/min : +- 5 |
| Spreed Tolerance cm3/1000 strokes : 5.0 | rack travel mm : 4.00 Rated speed rpm : 1155 Tolerance 1/min : + 15 |
| Check tolerance cm3/1000s. : 9.0 | rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1250 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | LOW IDLE |
| GUIDE SLEEVE POSITION | control lever position degree : 64.0 tolerance degree : +- 4.0 |
| control lever position degree : -1 Rated speed rpm : 1100 | control lever position degree : 9.0 tolerance degree : +- 4.0 Testing: |
| Rack travel in mm: 16.50 Tolerance mm: +- 1.30 | Rated speed rpm : 250 rack travel mm : 6.60 Tolerance mm : +- 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | Rated speed rpm : 100 |
| Rated speed rpm : 700 Aneroid pressure hPa : 1200 | CRT mm min. : > 8.10 |
| Del. quantity cm3/1000 strokes : 252.0 | CONTINUOUS-ACTION CONTROL |
| Tolerance cm3/1000 strokes : +- 1.0 check tolerance cm3/1000s. : +- 4.0 cm3/1000s. | Rated speed rpm : 315 |
| Spreed + Tolerance + cm3/1000 strokes : 5.0 + Check tolerance | ANEROID/ALTITUDE COMPENSATOR TEST |
| cm3/1000s. : 9.0 | SETTING |
| RATED SPEED control lever position degree : 65.0 | Rated speed rpm : 500 Pressure hPa : 1200 rack travel mm : 13.65 Tolerance mm : + 0.05 |
| tolerance degree : + 4.0 | MEASUREMENT Pressure hPa : - |

500 Rated speed rpm : 9.70 rack travel mm : + - 0.10Tolerance mm Rated speed rpm 500 Pressure hPa 780 3.30 rack travel mm Tolerance mm : + 0.10Pressure hPa 90 0.25 rack travel mm Toterance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 700 Rated speed rpm Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s.4.0 : +-**BREAKAWAY** 12.65 Rack travel in mm : Rated speed rpm : 1070 Tolerance 1/min : +-STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm : 20.50 : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : +- 24.0

| Note remarks | | x length mm : 600 |
|--|-------------------------------------|---|
| Defer to Service | Info for test and | <u> </u> |
| adjustment instru See microcard(s) | ections. | REMARKS |
| Edition Test oil | : 04.01.95 | |
| Combination No. | • | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. |
| Injection pump | - | per values |
| Pump designation EP type number | : PE6P110A320RS3329 : 0412016743 | BEGINNING OF DELIVERY |
| Governor Governer design. Governer no. | : RQV3251300PA1119 - | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Cust. part No. | : 1284418/3 | Prestroke mm : 4.85 Tolerance mm : +- 0.05 |
| | 7 | test only : +- 0.10 |
| Customer-spec. in Customer Motor | formation - | Rack travel in mm : 20.50 Tolerance mm : + 0.50 |
| motor Power KW | : 156.0 | Firing order : 1-5-3-6- |
| TEST BENCH REQUIR | EMENTS | |
| | - | - Phasing : 0-60-120-180-24 |
| Test oil inlet temp. °C Tolerance °C | : 40 | : -300 - Tolerance : +- 0.30 |
| Tolerance °C | : ← 2.0 | - Check - tolerance °NW : +- 0.75 |
| Overflow valve | : 1417413025 | - BEGINNING OF DELIVERY DIFFERENCE |
| talah uussa t | . 45 | OFOTHERING OF DEFINER DILLEGING |
| Inlet press. bar Tolerance bar | : +- 0.1 | Time to cyl. no. : 1 |
| Test nozzle holde assembly | : 1688901101 | BASIC SETTING |
| Opening pressure par | : 208.5 | - Rated speed rpm : 1000 |
| oar Tolerance bar | : +- 1.5 | Rack travel in mm : 11.85 Tolerance mm : + 0.05 |
| Test lines | : 1680750008 | <u></u> |
| | 4 | - Del. quantity |

| Tolerance cm3/1000 strokes | : +- 1.0 | + Rated speed rpm : 530 + guide sleeve |
|--|-------------------------------|--|
| Check tolerance cm3/1000S. | : ← 4.0 | travel mm : 2.93 Tolerance mm : +- 0.25 |
| Spreed Tolerance cm3/1000 strokes | : 4.0 | Rated speed rpm : 1640 guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50 |
| Check tolerance cm3/1000S. | : 7.5 | |
| 2nd speed rpm | : 325 | + GUIDE SLEEVE POSITION |
| Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. | : + 0.10 : 26.0 : + 2.5 | control lever position degree : - 1 Rated speed rpm : 1450 Rack travel in mm : 10.80 Tolerance mm : +- 1.30 |
| Spreed Tolerance | : 5.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes Check tolerance cm3/1000s. | | Rated speed rpm : 1000 Aneroid pressure hPa : 1000 Del. quantity |
| (B) SETTING OF INWITH GOVERNOR | JECTION PUMP | - cm3/1000 strokes : 144.0 - Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance |
| GUIDE SLEEVE TRAV | EL | + cm3/1000S. : +- 4.0 + Spreed + Tolerance |
| Rated speed rpm guide sleeve travel mm Tolerance mm | : 1.33 | cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 |
| Rated speed rpm | : 1353 | RATED SPEED |
| guide sleeve travel mm Tolerance mm | : 8.29 : + 0.20 | control lever |
| Rated speed rpm guide sleeve | | position degree : 122.0 tolerance degree : +- 4.0 |
| guide sleeve travel mm Tolerance mm | : 4.92 : + 0.25 | rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 |
| Rated speed rpm guide sleeve travel mm Tolerance mm | | rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 |
| Rated speed rpm guide sleeve travel mm Tolerance mm | : 455 : 2.52 : ← 0.25 | rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1600 |

| Tokerance mm | | † | Pressure hPa : 370 |
|---|---|-----------------------------------|---|
| control lever position degree : # 83.0 Tolerance mm : # 0.10 | LOW IDLE | <u> </u> | Tolerance mm : + 0.05 |
| Rated speed rpm : 325 rack travel mm : 4.50 Tolerance mm : + 0.10 Rated speed rpm : 225 Rated speed rpm : 225 Rated speed rpm : 225 Rated speed rpm : 225 Rated speed rpm : 225 CRT mm min. : > 6.00 CONTINUOUS—ACTION CONTROL Rated speed rpm : 375 Rated speed rpm : 375 Rated speed rpm : 600 Rated speed rpm : 600 CONTINUOUS—ACTION CONTROL Rated speed rpm : 1000 Rated speed rpm : 600 Rated speed rpm : 600 CONTROL Rated speed rpm : 1000 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : + 5.0 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 98.5 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 11.85 Tolerance mm : + 0.05 Rated speed rpm : 3300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 11.85 Tolerance mm : + 0.05 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 11.85 Tolerance mm : + 0.05 Rated speed rpm : 1342 Tolerance mm : + 0.05 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 5.20 Rated speed rpm : 5.20 Tolerance mm : + 0.05 Rated speed rpm : 5.20 Tolerance 1/min : + 5 Rated speed rpm : 5.20 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 26.0 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000 strokes : + 2.5 Check tolerance | position degree : | : 83.0 : + 4.0 | Pressure hPa : 200 rack travél mm : 8.40 Tolerance mm : +- 0.10 |
| Rated speed rpm 325 | Testing: | 1 | FILE DEL TVEDY CHARACTEDISTICS |
| Del. quantity | Rated speed rpm : rack travel mm : Tolerance mm : | : 325 : 4.50 : + 0.10 | Aneroid pressure hPa : 1000 Rated speed rpm : 700 |
| Tolerance | Rated speed rpm : | : 225 | Del. quantity cm3/1000 strokes : 145.0 |
| Rated speed rpm : 375 | CRT mm min. : | : > 6.00 | Tolerance cm3/1000 strokes : +- 2.0 |
| Pa | CONTINUOUS-ACTION C | CONTROL | Check tolerance cm3/1000s. : +- 5.0 |
| Del. quantity | Rated speed rpm : | : 375 | hPa - |
| Rated speed rpm : 1000 | TORQUE CONTROL | Ŧ | N = 1 |
| Cm3/1000s. : + 3.5 | Rated speed rpm : rack travel mm : Tolerance mm : | : 1000 + : 11.85 + : + 0.05 | Tolerance cm3/1000 strokes : +- 1.0 |
| ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 600 Pressure hPa : 1000 Prack travel mm : 11.85 Folerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 600 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : + 2.5 Rated speed rpm : 600 Pressure hPa : - Rated speed rpm : 600 Pressure hPa : - Rated speed rpm : 600 Tolerance cm3/1000 strokes : + 2.5 Rated speed rpm : 7.35 Folerance mm : + 0.20 Folerance mm : + 0.20 Folerance mm : + 5.0 Folerance mm : + 0.20 | | + | |
| ### COMPENSATOR TEST Compensator Test | Rated speed rpm : rack travel mm : Tolerance mm : | 1300 11.85 +- 0.05 | Rated speed rpm : 1342 |
| LOW IDLE | | <u> </u> | |
| Rated speed rpm : 600 Pressure hPa : 1000 | SETTING | ‡ | I OU TO F |
| MEASUREMENT + cm3/1000 strokes : 26.0 Pressure hPa : - cm3/1000 strokes : + 2.5 Rated speed rpm : 600 rack travel mm : 7.35 rolerance mm : + 0.20 rolerance - cm3/1000s. : + 5.0 Folerance mm : + 0.20 rolerance - Spreed rolerance | Pressure hPa : rack travel mm : | 1000 + | Rated speed rpm : 325 rack travel mm : 5.20 Tolerance mm : + 0.10 |
| Pressure hPa : - + cm3/1000 strokes : + 2.5 Rated speed rpm : 600 + Check tolerance rack travel mm : 7.35 + cm3/1000s. : + 5.0 Tolerance mm : + 0.20 + Spreed Tolerance | MEASUREMENT | 1 | cm3/1000 strokes : 26.0 |
| Tolerance mm : +- 0.20 + Spreed + Tolerance | Rated speed rpm : | | cm3/1000 strokes : +- 2.5 Check tolerance |
| Rated speed rpm : 600 + cm3/1000 strokes : 4.5 | Tolerance mm : | + 0.20 | Spreed Tolerance |
| † | Rated speed rpm : | 600 | |

Check tolerance cm3/1000s. : 7.5

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.01.95 : ISO 4113

Combination No.

: 0402646654

Injection pump

Pump designation : PE6P12DA32ORS736OZ

EP type number

: 0412626937

Governor

Governer design. : RQ275/1150PA1193

Governer no.

: 0421801752

Cust. part No. : 1285911/2

Customer-spec. information

Customer

: DAF

Motor

: GS 160 M

Power KW

: 160.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 1417413025

Inlet press. bar :

Tolerance bar

: ← 0.1

Test nozzle holde

assembly

: 1688901105

Opening pressure

208.5

Tolerance bar

: **←** 1.5

Test lines

: 1680750089

Outside diameter :

8.0

x inside diameter :

3.0

x Length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +-

Prestroke mm 5.15

Tolerance mm

test only : **←** 0.10

Rack travel in mm: 11.40

Tolerance mm : + 0.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: + 0.30Tolerance

Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm

1000

Rack travel in mm : 10.40

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes :

150.0

| Tolerance cm3/1000 strokes : +- 1.0 | Rated speed rpm : 1360 |
|--|--|
| Check tolerance cm3/1000s. : +- 4.0 | guide sleeve travel mm : 11.50 Tolerance mm : +- 0.10 |
| Spreed Tolerance cm3/1000 strokes : 5.0 | GUIDE SLEEVE POSITION |
| Check tolerance cm3/1000s. : 9.0 | control lever position degree : - 1 Rated speed rpm : 550 |
| 2nd speed rpm : 275 | + |
| Rack travel in mm : 4.90 Tolerance mm : + 0.10 Del. quantity | Rack travel in mm : 15.80 Tolerance mm : +- Q.60 |
| cm3/1000 strokes : 15.0 Tolerance | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes : +- 3.0 | Rated speed rpm : 1000 |
| Check tolerance cm3/1000s. : +- 6.0 | + Aneroid pressure + hPa : 1000 |
| Spreed Tolerance | + Del. quantity + cm3/1000 strokes : 150.0 |
| cm3/1000 strokes : 8.0 Check tolerance | Tolerance + cm3/1000 strokes : +- 1.0 |
| cm3/1000s. : 12.0 | + Check tolerance + cm3/1000S. : +- 4.0 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL | - Spreed - Tolerance - cm3/1000 strokes : 5.0 - Check tolerance - cm3/1000s. : 9.0 |
| Rated speed rpm : 275 | RATED SPEED |
| guide sleeve travel mm : 1.92 | <u>†</u> |
| Tolerance mm : +- 0.10 | control lever position degree : 97.0 |
| Rated speed rpm : 1206 | + position degree : 97.0 + tolerance degree : +- 4.0 |
| guide sleeve travel mm : 6.49 | rack travel mm : 9.40 |
| Tolerance mm : + 0.10 | Rated speed rpm : 1202 Tolerance 1/min : +- 8 |
| Rated speed rpm : 1150 guide sleeve | rack travel mm : 4.00 |
| travel mm : 6.00 | + Rated speed rpm : 1265 |
| Tolerance mm : ← 0.10 | Tolerance 1/min : +- 15 |
| Rated speed rpm : 351 guide sleeve | + rack travel mm : 0.70 + Tolerance mm : +- 0.70 |
| travel mm : 4.25 | Rated speed rpm : 1450 |
| Tolerance mm : +- 0.10 | |
| Rated speed rpm : 440 guide sleeve | LOW IDLE |
| travel mm : 6.00 Tolerance mm : +- 0.10 | |

| | | • |
|---|--|------------------------------|
| control lever position degree tolerance degree | : 74.0 : +- 4.0 | - FL |
| Testing: | | + Ar + hF |
| Rated speed rpm rack travel mm Tolerance mm | : 275 : 4.90 : + 0.10 | + Ra + De + cm + To |
| rack travel mm Rated speed rpm Tolerance 1/min | : 2.00 : 340 : + 20 | + cm |
| Rated speed rpm | : 175 | ‡ BR |
| CRT mm min. | : > 7.00 | ‡ + Ra |
| TORQUE CONTROL | | + Ra + To |
| Rated speed rpm rack travel mm Tolerance mm | : 1000 : 10.40 : +- 0.05 | † † |
| Rated speed rpm rack travel mm Tolerance mm | : 1150 : 10.40 : ← 0.10 | LO Ra |
| ANEROID/ALTITUDE COMPENSATOR TEST | | ra To De |
| SETTING | | To cm |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 600 : 1000 : 10.40 : ← 0.05 | + Ch - cm - Sp - To |
| MEASUREMENT | | + Ch |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 600 : 9.50 : + 0.10 | † † † † |
| Rated speed rpm | : 600 | Ŧ |
| Pressure hPa rack travel mm Tolerance mm | : 290 : 10.15 : + 0.05 | ‡ |
| Pressure hPa rack travel mm Tolerance mm | : 250 : 9.80 : + 0.10 | † |
| | | _ |

| Aneroid pressure hPa : - Rated speed rpm : 600 bel. quantity cm3/1000 strokes : 131.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 BREAKAWAY Rack travel in mm : 9.40 Rated speed rpm : 1202 Tolerance 1/min : + 8 LOW IDLE Rated speed rpm : 4.90 Tolerance mm : + 0.10 bel. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 | FUEL DELIVERY CHA | ARACTERISTICS |
|--|---|--------------------------|
| Rack travel in mm : 9.40 Rated speed rpm : 1202 Tolerance 1/min : +- 8 LOW IDLE Rated speed rpm : 275 rack travel mm : 4.90 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance | hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance | : 131.5 : +- 1.0 |
| Rated speed rpm : 1202 Tolerance 1/min : +- 8 LOW IDLE Rated speed rpm : 275 rack travel mm : 4.90 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance | BREAKAWAY | |
| Rated speed rpm : 275 rack travel mm : 4.90 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance | Rack travel in mm Rated speed rpm Tolerance 1/min | 9.40 : 1202 : +- 8 |
| rack travel mm : 4.90 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance | LOW IDLE | |
| cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance | rack travel mm Tolerance mm | : 4.90 |
| cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance | cm3/1000 strokes | : 15.0 |
| cm3/1000S. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance | cm3/1000 strokes | : +- 3.0 |
| Tolerance cm3/1000 strokes : 8.0 Check tolerance | cm3/1000S. | : +- 6.0 |
| Check tolerance cm3/1000S. : 12.0 | Tolerance cm3/1000 strokes | : 8.0 |
| | Check tolerance cm3/1000s. | : 12.0 |
| | | |
| | | |

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 03.01.95 Edition Test oil : ISO 4113 Combination No. : 0402676818 Injection pump Pump designation : PE6P120A320RS7326 EP type number : 0412626915 Governor Governer design. : RSV275...1000P1A573 Governer no. : 0421833429 Cust. part No. : 1265070/3 Customer-spec. information Customer : DAF : WS 268 L AG Motor Power KW : 268.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413025 Inlet press. bar 1.5 Tolerance bar : +-0.1 Tolerance l/h : +- 10.0 Test nozzle holde : 1688901105 assembly Opening pressure 208.5 bar Tolerance bar Lube oil : 1409918004

Test lines : 1680750089 Outside diameter : 8.0 x inside diameter : 3.0 600 x length mm : **REMARKS** (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : Tolerance bar : +-Prestroke mm 5.35 Tolerance mm : +- 0.05 : + - 0.10test only Rack travel in mm: 14.50 Tolerance mm : +- 0.50 Firing order : 1-5-3-6-2-Phasing : 0-60-120-180-240 : -300 : + 0.30Tolerance Check tolerance °NW : **←** 0.75 BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : 1 BASIC SETTING 850 Rated speed rpm :

| Rack travel in mm : 14.95 Tolerance mm : + 0.05 | Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 235.0 |
|---|---|
| Del. quantity cm3/1000 strokes : 235.0 | Tolerance cm3/1000 strokes : +- 1.0 |
| Tolerance cm3/1000 strokes : + 1.0 | Check tolerance cm3/1000S. : +- 4.0 Spreed |
| Check tolerance cm3/1000s. : +- 4.0 | Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 |
| Spreed Tolerance cm3/1000 strokes : 5.0 | RATED SPEED |
| Check tolerance cm3/1000s. : 9.0 | control lever position degree : 107.0 tolerance degree : +- 4.0 |
| Rack travel in mm: 6.20 Tolerance mm: + 0.10 Del. quantity | rack travel mm : 13.95 Rated speed rpm : 1032 Tolerance 1/min : +- 8 |
| cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 | rack travel mm : 4.00 Rated speed rpm : 1100 Tolerance 1/min : +- 15 |
| Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance | rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1250 |
| cm3/1000S. : 12.0 | rack travel mm : 4.00 Rated speed rpm : 1110 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | LOW IDLE |
| GUIDE SLEEVE POSITION | control lever position degree : 72.0 tolerance degree : + 4.0 |
| control lever position degree : - 3 | Setting point w/out bumper spring |
| Rated speed rpm : 800 | Rated speed rpm : 275 rack travel mm : 4.50 |
| Tolerance mm : + 0.20 | Testing: |
| governor spring pre-tension click setting x : 4.00 | Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 | rack travel mm : 2.00 Rated speed rpm : 360 Tolerance 1/min : +- 30 |
| There speck i pill . ODU | |

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TORQUE CONTROL

Rated speed rpm : 850 rack travel mm : 14.95 Tolerance mm : + 0.05

Rated speed rpm : 1000 rack travel mm : 14.90 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600 Pressure hPa : 1000 rack travel mm : 14.95 Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 600
rack travel mm : 12.40
Tolerance mm : + 0.10

Rated speed rpm : 600

Pressure hPa : 490 rack travel mm : 14.25 Tolerance mm : + 0.05

Pressure hPa : 280 rack travel mm : 12.90 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 600 Del. quantity

cm3/1000 strokes : 159.0 Tolerance

cm3/1000 strokes : + 1.0 Check tolerance

cm3/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 13.95

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Rated speed rpm : 1032 Tolerance 1/min : +- 8

LOW IDLE

Rated speed rpm : 275
rack travel mm : 6.20
Tolerance mm : + 0.10
Del. quantity

cm3/1000 strokes : 17.0 Tolerance

cm3/1000 strokes : +Check tolerance

cm3/1000s. : +- 6.0

3.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

| | 1 |
|--|---|
| BOSCH INJ. PUMP TEST SPECIFICATIONS | x inside diameter : 2.0 |
| Note remarks | + x length mm : 600 |
| Refer to Service Info for test and adjustment instructions. See microcard(s) W400/ | REMARKS |
| Edition : 12.12.94 Test oil : ISO 4113 | (A) INJECTION PUMP SETTING VALUES |
| Combination No. : 0402036749 | Set equal delivery quant. per values |
| Injection pump Pump designation : PES6P110A120RS3286 EP type number : 0412016737 | BEGINNING OF DELIVERY |
| Governor Governer design. : RQV3501150PA1014 : -2K | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Governer no. : 0421815296 - | - Prestroke mm : 3.25 - Tolerance mm : +- 0.05 |
| Cust. part No. : 3921971 - | test only : +- 0.10 |
| Customer-spec. information | Rack travel in mm : 10.50 Tolerance mm : +- 1.50 |
| Customer : CUMMINS - Motor : 6CTA-A - Power KW : 168.0 - | Firing order : 1-5-3-6-2- : 4 |
| TEST BENCH REQUIREMENTS | |
| | - Phasing : 0-60-120-180-240 - : -300 |
| Test oil inlet temp. °C : 40 | - Tolerance : +- 0.30 - Check |
| Tolerance °C : +- 2.0 | tolerance °NW : +- 0.50 |
| Overflow valve : 1419992198 - | - BEGINNING OF DELIVERY DIFFERENCE |
| Inlet press. bar : 1.5 | Time to cyl. no. : 1 S.o.d. blocking |
| Test nozzle holde assembly : 1688901101 | - Barrel no. : 1 - Tolerance : + 0.10 - Check |
| Opening pressure : 208.5 - Tolerance bar : + 1.5 - | tolerance °NW : + 0.23 |
| | - BASIC SETTING |
| Test lines : 1680750008 | - Rated speed rpm : 1100 |
| Outside diameter : 6.0 | - Rack travel in mm : 15.45 |

| Tolerance mm : +- 0.05 | + rack travel mm : 14.20 - Rated speed rpm : 1220 |
|---|---|
| Del. quantity cm3/1000 strokes : 154.0 | Tolerance 1/min : +- 5 - rack travel mm : 4.00 |
| Tolerance cm3/1000 strokes : + 1.0 | Rated speed rpm : 1395 Tolerance 1/min : +- 15 |
| Check tolerance cm3/1000s. : + 3.0 | rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1500 |
| Spreed Tolerance cm3/1000 strokes : 4.0 | LOW IDLE |
| Check tolerance cm3/1000s. : 7.5 | control lever position degree : 16.0 tolerance degree : + 4.0 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 69.0 tolerance degree : + 4.0 |
| GUIDE SLEEVE POSITION | Testing: |
| control lever position degree : - 1 | Rated speed rpm : 350 rack travel mm : 6.00 Tolerance mm : + 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | Rated speed rpm : 275 |
| Rated speed rpm : 1100 | CRT mm min. : > 7.30 |
| Aneroid pressure hPa : 1200 | CONTINUOUS-ACTION CONTROL |
| Del. quantity cm3/1000 strokes : 154.0 Tolerance | Rated speed rpm : 350 |
| cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 3.0 | TORQUE CONTROL |
| Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance | Rated speed rpm : 1100 rack travel mm : 15.45 Tolerance mm : + 0.05 |
| cm3/1000s. : 7.5 | Rated speed rpm : 750 rack travel mm : 14.30 Tolerance mm : + 0.20 |
| RATED SPEED | + |
| control lever position degree : 112.0 | Rated speed rpm : 1150 rack travel mm : 15.30 Tolerance mm : + 0.10 |
| tolerance degree : +- 4.0 | Rated speed rpm : 650 rack travel mm : 14.10 Tolerance mm : +- 0.20 |
| control lever position degree : 59.0 tolerance degree : + 4.0 | Toterance mm : +- U.2U |

| : 1100 : 1200 : 15.45 : ← 0.05 |
|---|
| |
| : 1100 |
| : 600 : 13.80 : ← 0.20 |
| : 290 : 10.65 : + 0.05 |
| |
| : > 100 |
| : > 80 : < 290 |
| : < 300 |
| RACTERISTICS |
| : 1200 : 750 |
| : 156.0 |
| : ← 2.0 |
| : +- 4.0 |
| : 8.0 |
| : 12.0 |
| |
| : 500 |
| : 76.5 |
| : +- 2.0 |
| |

Check tolerance cm3/1000s. : +- 4.0 BREAKAWAY Rack travel in mm : 14.20
Rated speed rpm : 1220
Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : rack travel mm : 100 11.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 25.0

| | | i . |
|---|--|--|
| BOSCH INJ. PUMP T | TEST SPECIFICATIONS | x inside diameter: 2.0 x length mm : 600 |
| Note remarks | | T x cengarian . 000 |
| Refer to Service adjustment instru See microcard(s) | Info for test and uctions. W400/ | REMARKS |
| Edition Test oil | : 12.12.94 : ISO 4113 | |
| Combination No. | : 0402036750 | + (A) INJECTION PUMP SETTING VALUES + Set equal delivery quant. + per values |
| Injection pump Pump designation EP type number | : PES6P110A120RS3286 : 0412016737 | BEGINNING OF DELIVERY |
| _ | : RQV3501150PA1014 : -3K | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| Governer no. | | Prestroke mm : 3.25 Tolerance mm : + 0.05 |
| Cust. part No. | : 3921972 | test only : +- 0.10 |
| Customer-spec. in | | Rack travel in mm: 10.50 Tolerance mm: + 1.50 |
| Customer Motor Power KW | : 6CTA-A | Firing order : 1-5-3-6-2- |
| TEST BENCH REQUIR | EMENTS | ‡ |
| | | + Phasing : 0-60-120-180-240 : -300 |
| Test oil inlet temp. °C | : 40 | Tolerance : + 0.30 |
| Tolerance °C | : ← 2.0 | tolerance °NW : + 0.50 |
| Overflow valve | : 1419992198 | BEGINNING OF DELIVERY DIFFERENCE |
| Inlet press. bar | : 1.5 | Time to cyl. no. : 1 |
| Test nozzle holde assembly | : 1688901101 | + S.o.d. blocking + Barrel no. : 1 + Tolerance : + 0.10 + Check |
| Opening pressure bar Tolerance bar | : 208.5 : + 1.5 | tolerance °NW : + 0.23 BASIC SETTING |
| Test lines | : 1680750008 | Rated speed rpm : 1100 |
| Outside diameter | | |
| | | Rack travel in mm : 14.65 |

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| ANEROID/ALTITUDE COMPENSATOR TEST | |
|---|---|
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1100 : 1200 : 14.65 : + 0.05 |
| MEASUREMENT | |
| Rated speed rpm | : 1100 |
| Pressure hPa rack travel mm Tolerance mm | : 600 : 13.80 : + 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 290 : 10.65 : +- 0.05 |
| START CUT-OUT | |
| Rated speed rpm Check speed 1/min Rated speed rpm | : > 80 |
| Check speed 1/min | : < 300 |
| FUEL DELIVERY CHA | ARACTERISTICS |
| Aneroid pressure hPa Rated speed rpm Del. quantity | |
| cm3/1000 strokes Tolerance | : 141.0 |
| cm3/1000 strokes Check tolerance cm3/1000s. | : +- 2.0 : +- 4.0 |
| Spreed Tolerance cm3/1000 strokes | : 8.0 |
| Check tolerance cm3/1000s. | : 12.0 |
| Aneroid pressure hPa Rated speed rpm | : – : 500 |
| Del. quantity cm3/1000 strokes | : 76.5 |
| Tolerance cm3/1000 strokes | : +- 2.0 |

Check tolerance : +- 4.0 BREAKAWAY Rack travel in mm : 13.40
Rated speed rpm : 1225
Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : +- 25.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 12.12.94 Test oil : ISO 4113 Combination No. : 0402036751 Injection pump Pump designation : PES6P110A120RS3286 EP type number : 0412016737 Governor Governer design. : RQV350...1200PA1014 : -4K Governer no. : 0421815299 Cust. part No. : 3921973 Customer-spec. information Customer : CDC : 6CTA-A Motor : 156.5 Power KW TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1419992198 Inlet press. bar : Test nozzle holde assembly : 1688901101 Opening pressure 208.5 Tolerance bar 1.5 Test lines : 1680750008

```
x inside diameter :
                       2.0
x length mm :
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : +- 1.0
Prestroke mm
Tolerance mm
                : +- 0.10
test only
Rack travel in mm: 10.50
Tolerance mm : +- 1.50
                : 1-5-3-6-2-
Firing order
Phasing
                : 0-60-120-180-240
                : -300
                : + - 0.30
Tolerance
Check
tolerance °NW
                : +-0.50
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
                : \leftarrow 0.10
Tolerance
Check
tolerance °NW
                : ← 0.23
BASIC SETTING
Rated speed rpm
                : 1100
Rack travel in mm: 14.55
Tolerance mm
                : + 0.05
```

Outside diameter :

6.0

| Del. quantity cm3/1000 strokes : 142.5 | Tolerance 1/min : +- 15 rack travel mm : 0.50 |
|--|---|
| Tolerance cm3/1000 strokes : + 1.0 | Tolerance mm : +- 0.50 Rated speed rpm : 1500 |
| Check tolerance cm3/1000s. : + 3.0 | LOW IDLE |
| Spreed Tolerance cm3/1000 strokes : 4.0 | control lever position degree : 14.0 tolerance degree : + 4.0 |
| Check tolerance cm3/1000s. : 7.5 | Testing: |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | Rated speed rpm : 350 rack travel mm : 5.90 Tolerance mm : + 0.10 |
| + | Rated speed rpm : 275 |
| GUIDE SLEEVE POSITION | CRT mm min. :> 7.30 |
| control lever | CONTINUOUS-ACTION CONTROL |
| position degree : -1 | Rated speed rpm : 435 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | TORQUE CONTROL |
| Rated speed rpm : 1100 | |
| Aneroid pressure + hPa : 1200 + | Rated speed rpm : 1100 |
| Del. quantity | rack travel mm : 14.55 Tolerance mm : ← 0.05 |
| cm3/1000 strokes : 142.5 | Pated speed rpm · 750 |
| cm3/1000 strokes : $+$ 1.0 $+$ | Rated speed rpm : 750 rack travel mm : 13.50 |
| Check tolerance + 3.0 + | Tolerance mm : \leftarrow 0.10 |
| Spreed - 3.0 | Rated speed rpm : 1150 |
| Tolerance + cm3/1000 strokes : 4.0 + | rack travel mm : 14.40 Tolerance mm : +- 0.10 |
| Check tolerance \downarrow | roterance min : 0.10 |
| cm3/1000s. : 7.5 | Rated speed rpm : 650 rack travel mm : 13.30 Tolerance mm : +- 0.20 |
| RATED SPEED | . S. 25 |
| control lever position degree : 58.0 tolerance degree : +- 4.0 | ANEROID/ALTITUDE COMPENSATOR TEST |
| + | SETTING |
| rack travel mm : 13.30 + Rated speed rpm : 1275 + | Rated speed rpm : 1100 |
| Tolerance 1/min : +- 5 | Pressure hPa : 1200 |
| rack travel mm : 4.00 Rated speed rpm : 1415 | rack travel mm : 14.55 Tolerance mm : + 0.05 |
| | |

| MEASUREMENT | |
|--|---|
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 1100 : 9.10 : + 0.20 |
| Rated speed rpm | : 1100 |
| Pressure hPa rack travel mm Tolerance mm | : 475 : 13.20 : + 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 215 : 10.45 : ← 0.05 |
| START CUT-OUT | |
| Rated speed rpm Check | : > 100 |
| speed 1/min | : > 80 : < 290 |
| Rated speed rpm | <u> </u> |
| Rated speed rpm Check speed 1/min | : < 300 |
| Rated speed rpm Check | : < 300 RACTERISTICS |
| Rated speed rpm Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm | : < 300 RACTERISTICS : 1200 |
| Rated speed rpm Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa | : < 300 RACTERISTICS : 1200 : 750 |
| Rated speed rpm Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes | : < 300 RACTERISTICS : 1200 : 750 : 139.0 |
| Rated speed rpm Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed | : < 300 RACTERISTICS : 1200 : 750 : 139.0 |
| Rated speed rpm Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes | : < 300 RACTERISTICS : 1200 : 750 : 139.0 : ← 2.0 |
| Rated speed rpm Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance | : < 300 RACTERISTICS : 1200 : 750 : 139.0 : ← 2.0 : ← 4.0 |
| Rated speed rpm Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Aneroid pressure hPa | : < 300 RACTERISTICS : 1200 : 750 : 139.0 : ← 2.0 : ← 4.0 : 8.0 : 12.0 : - |
| Rated speed rpm Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity | : < 300 RACTERISTICS : 1200 : 750 : 139.0 : ← 2.0 : ← 4.0 : 8.0 : 12.0 : |
| Rated speed rpm Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. | : < 300 RACTERISTICS : 1200 : 750 : 139.0 : + 2.0 : + 4.0 : 8.0 : 12.0 : 500 : 76.5 |
| Rated speed rpm Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aprecid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes | : < 300 RACTERISTICS : 1200 : 750 : 139.0 : ← 2.0 : ← 4.0 : 8.0 : 12.0 : |

Rated speed rpm : 1275 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0

Tolerance cm3/1000 strokes : +- 20.0 Check tolerance

Check tolerance cm3/1000s. : +- 25.0

BREAKAWAY

Rack travel in mm : 13.30

| Note remarks | | x Length mm : 1000 |
|---|---|--|
| Refer to Service adjustment instru See microcard(s) | | REMARKS |
| Edition Test oil | : 13.01.95 : ISO 4113 | ‡ ‡ |
| Combination No. | | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. |
| Pump designation EP type number | : PE8P130A900/5LS7841 : -1 : 0412638807 | per values BEGINNING OF DELIVERY |
| Governor Governer design. Governer no. | | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| Cust. part No. | : | Prestroke mm : 5.05 Tolerance mm : + 0.05 |
| Customer—spec. in Customer Notor | | test only : +- 0.10 Rack travel in mm : 12.00 Tolerance mm : +- 0.50 Firing order : 1-8-4-3-4 |
| FEST BENCH REQUIR | EMENTS | Firing order : 1-8-4-3-6 : -5-7-2 |
| Fest oil inlet temp. °C Folerance °C | : 40 : + 2.0 | + Phasing : 0-45-90-135-180 : -225-270-315 + Tolerance : + 0.50 |
| Overflow valve | : 2417413076 | - Check - tolerance °NW : +- 0.75 |
| Inlet press. bar Tolerance bar | | BEGINNING OF DELIVERY DIFFERENCE S.o.d. blocking Barrel no. : 1 |
| Fest nozzle holde assembly | : 1688901105 | BASIC SETTING |
| pening pressure par olerance bar | : 208.5 : + 1.5 | Rated speed rpm : 550 |
| est lines | : 1680750075 | + Rack travel in mm : 10.55 Tolerance mm : +- 0.05 |
| Outside diameter | : 8.0 | Del. quantity cm3/1000 strokes : 215.0 |

| | | ∔ Tolerance mm | : +- 0.05 |
|---|--|--|---|
| Tolerance cm3/1000 strokes | : +- 1.0 | Rated speed rpm | : 950 : 10.50 |
| Check tolerance cm3/1000S. | : + 4.0 | Tolerance mm | : + 0.10 |
| Spreed Tolerance cm3/1000 strokes | : 8.0 | FUEL DELIVERY CHA | PACTERISTICS |
| Check tolerance | . 0.0 | Aneroid pressure | WACI LIVIO 1100 |
| cm3/1000s. | : 12.0 | + hPa | : – : 950 |
| 2nd speed rpm | : 300 | Rated speed rpm Del. quantity | |
| Rack travel in mm Tolerance mm | : 4.20 : +- 0.20 | cm3/1000 strokes Tolerance cm3/1000 strokes | : 217.0 : + 3.0 |
| Del. quantity cm3/1000 strokes Tolerance | : 25.0 | Check tolerance cm3/1000s. | : +- 6.0 |
| | : ← 3.0 | <u> </u> | |
| cm3/1000s. Spreed Tolerance | : +- 6.0 | STARTING FUEL DEL | IVERY |
| cm3/1000 strokes | : 5.0 | Rated speed rpm | : 100 |
| Check tolerance cm3/1000S. | : 9.0 | rack travel mm Tolerance mm | : 21.00 : +- 0.50 |
| (B) SETTING OF INJ WITH GOVERNOR | ECTION PUMP | Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : 165.0 : +- 15.0 : +- 19.0 |
| FULL LOAD DELIVERY | AT FULL LOAD STOP | ‡ | |
| Rated speed rpm Aneroid pressure hPa | : 550 | LOW IDLE | |
| Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000S. | : 215.0 : + 1.0 : + 4.0 : 8.0 : 12.0 | Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes cm3/1000 strokes cm3/1000 strokes cm3/1000s. | : 300 : 4.20 : + 0.20 : 25.0 : + 3.0 : + 6.0 : 5.0 : 9.0 |
| TORQUE CONTROL | | † | |

Rated speed rpm : rack travel mm :

550 10.55

| | • | 1 |
|---|--------------------------------|---|
| BOSCH INJ. PUMP T | EST SPECIFICATIONS | x inside diameter: 3.0 x length mm : 600 |
| Note remarks | | . do |
| Refer to Service adjustment instru See microcard(s) | Info for test and -ctionsw400/ | REMARKS |
| Edition Test oil Combination No. | - | - (A) INJECTION PUMP SETTING VALUES - Set equal delivery quant. |
| Injection pump | : PE6P130A720RS7371 | per values |
| Governor | : RQV250900PA1215 | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| Cust. part No. | : 3825482 : -P01 11:01.95 | - Prestroke mm : 4.35 - Tolerance mm : + 0.05 |
| | | test only: + 0.10 |
| Customer-spec. in | formation | Rack travel in mm : 7.80 Tolerance mm : +- 0.50 |
| Customer Motor Power KW | : TAMD 163 A : 405.0 | - Firing order : 1-5-3-6-2- - : 4 |
| TEST BENCH REQUIR | EMENTS | - - - Phasing : 0-60-120-180-240 |
| Test oil inlet temp. °C Tolerance °C | : 40 : + 2.0 | : -300 - Tolerance : +- 0.30 - Check - tolerance °NW : +- 0.50 |
| roterance t | . + 2.0 | - toterance isw : += 0.50 |
| Overflow valve | : 1457413010 | BEGINNING OF DELIVERY DIFFERENCE |
| Inlet press. bar Tolerance bar | : 1.5 : + 0.1 | Time to cyl. no. : 1 |
| Test nozzle holde assembly | : 4688901105 | BASIC SETTING |
| Opening pressure bar | : 208.5 | - Rated speed rpm : 900 |
| Tolerance bar | : + 1.5 | Rack travel in mm : 13.20 Tolerance mm : +- 0.05 |
| Test lines | : 1680750089 | Del. quantity cm3/1000 strokes : 379.0 |
| Outside diameter | : 8.0 | |

| Tolerance cm3/1000 strokes | : 1.5 - | Tolerance mm : +- 0.50 |
|--|---------------------|--|
| Check tolerance cm3/1000s. | | GUIDE SLEEVE POSITION |
| Spreed Tolerance cm3/1000 strokes | | control lever position degree : - 1 Rated speed rpm ; 1030 |
| Check tolerance cm3/1000s. | : 11.0 | Rack travel in mm : 11.00 Tolerance mm : +- 2.00 |
| Del. quantity cm3/1000 strokes Tolerance | : 22.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes | • | - Rated speed rpm : 900 - Aneroid pressure |
| cm3/1000S. Spreed | : ← 6.0 | hPa : 1500 - Del. quantity |
| Tolerance cm3/1000 strokes Check tolerance | : 7.0 | - cm3/1000 strokes : 379.0 - Tolerance - cm3/1000 strokes : +- 1.5 |
| cm3/1000s. | : 11.0 | - Check tolerance - cm3/1000s. : +- 5.0 |
| (B) SETTING OF I | NJECTION PUMP - | - Spreed - Tolerance - cm3/1000 strokes : 7.0 - Check tolerance |
| GUIDE SLEEVE TRA | VEL - | - cm3/1000s. : 11.0 |
| Rated speed rpm guide sleeve | 4 | RATED SPEED |
| travel mm Tolerance mm | : 1.12 : +- 0.25 | - control lever |
| Rated speed rpm guide sleeve | : 959 | - position degree : 64.0 - tolerance degree : +- 4.0 - |
| travel mm Tolerance mm | + | - control lever - position degree : 119.0 - tolerance degree : +- 4.0 |
| Rated speed rpm guide sleeve travel mm | • | - - rack travel mm : 12.20 - Rated speed rpm : 945 _ |
| guide sleeve travel mm Tolerance mm | : ← 0.25 | - Tolerance 1/min : +- 5 |
| Rated speed rpm guide sleeve | 4 | - rack travel mm : 4.00 - Rated speed rpm : 1030 - Tolerance 1/min : +- 15 |
| travel mm Tolerance mm | : 2.47 : + 0.25 | • |
| Rated speed rpm guide sleeve | : 650 | - rack travel mm : 0.50 - Tolerance mm : +- 0.50 - Rated speed rpm : 1120 |
| guide sleeve travel mm Tolerance mm | : 4.40 : +- 0.25 | LOW IDLE |
| Rated speed rpm guide sleeve | 4 | - FOM TOPE |
| travel mm | : 11.50 | |

| | | + |
|---|--|--|
| control lever position degree tolerance degree | : 73.0 : + 4.0 | FUEL DELIVERY CHARACTERISTICS |
| control lever position degree tolerance degree | : 17.0 | Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 406.0 Tolerance |
| Rated speed rpm rack travel mm Tolerance mm | : 250 : 6.70 : +- 0.20 | cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure |
| Rated speed rpm | : 150 | + hPa : - |
| CRT mm min. | : > 8.30 | <pre>Del. quantity cm3/1000 strokes : 196.0</pre> |
| CONTINUOUS-ACTION | N CONTROL | - |
| Rated speed rpm | : 350 | check tolerance cm3/1000s. : + 5.0 |
| TORQUE CONTROL | | BREAKAWAY |
| Rated speed rpm rack travel mm Tolerance mm | : 13.20 | Rack travel in mm: 12.20 Rated speed rpm: 945 Tolerance 1/min: +- 5 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | - † † † |
| SETTING | | LOW IDLE |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 1500 : 13.20 : ← 0.05 | Del. quantity cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : + 3.0 |
| MEASUREMENT | | + Check tolerance |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 500 : 7.80 : +- 0.10 | Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance |
| Rated speed rpm | : 500 | + cm3/1000s. : 11.0 |
| Pressure hPa rack travel mm Tolerance mm | : 900 : 6.10 : + 0.15 | |
| Pressure hPa rack travel mm Tolerance mm | : 170 : 0.25 : +- 0.05 | |
| | | ı |

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 13.01.95 : ISO 4113

Combination No.

: 0402646872Y

Injection pump

Pump designation

: PE6P120A720RS7126

: -10Y

EP type number

: 0412626930

Governor

Governer design.

: RQV200...1000PA725

: -6

Governer no.

: 0421813755

Cust. part No.

Customer-spec. information Customer : SCANIA

Motor : DSC11 30

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 1417413025

Inlet press. bar :

Test nozzle holde

assembly

: 1688901019

Opening pressure

208.5

Tolerance bar

: +- 1.5

Test lines

: 1680750015

Outside diameter :

6.0

x inside diameter :

3.0

x length mm :

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +-

Prestroke mm : + 0.05Tolerance mm

: +- 0.10test only

Rack travel in mm : 10.50

Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW

: + - 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm

700

Rack travel in mm :

14.45

Tolerance mm

: +- 0.05

| Del. quantity cm3/1000 strokes : 246.0 | + Spreed + Tolerance + cm3/1000 strokes : 6.0 |
|--|--|
| Tolerance cm3/1000 strokes : + 1.0 | Check tolerance cm3/1000s. : 9.0 |
| Check tolerance cm3/1000s. : + 4.0 | RATED SPEED |
| Spreed Tolerance cm3/1000 strokes : 6.0 | control lever position degree : 62.0 tolerance degree : + 4.0 |
| Check tolerance : 9.0 | control lever position degree : 117.0 |
| 2nd speed rpm : 225 | tolerance degree : + 4.0 |
| Rack travel in mm : 4.80 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 20.0 | rack travel mm : 13.40 Rated speed rpm : 1045 Tolerance 1/min : +- 5 |
| Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000S. : + 4.0 | rack travel mm : 4.00 Rated speed rpm : 1160 Tolerance 1/min : + 15 |
| <pre>cm3/1000S. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 3.0</pre> | rack travel mm : 0.50 Tolerance mm : +- 0.50 |
| Check tolerance cm3/1000s. : 6.0 | Rated speed rpm : 1300 LOW IDLE |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 65.0 tolerance degree : +- 4.0 |
| GUIDE SLEEVE POSITION | control lever position degree : 8.0 tolerance degree : +- 4.0 |
| control lever position degree : - 1 Rated speed rpm : 1170 | Testing: |
| Rack travel in mm : 9.00 Tolerance mm : + 3.00 | Rated speed rpm : 225 rack travel mm : 4.80 Tolerance mm : +- 0.10 |
| CINA LOAD DELTHEDY AT THE LOAD OFFI | Rated speed rpm : 100 |
| FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 | CRT mm min. : > 6.30 |
| Aneroid pressure hPa : - | CONTINUOUS-ACTION CONTROL |
| Del. quantity cm3/1000 strokes : 246.0 Tolerance | Rated speed rpm : 275 |
| cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 | TORQUE CONTROL |
| · · · · · · · · · · · · · · · · · · · | |

| Rated speed rpm rack travel mm Tolerance mm | : 1000 : 14.45 : ← 0.05 |
|---|---------------------------------------|
| ANEROID/ALTITUDE COMPENSATOR TEST | |
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 900 : 14.45 : + 0.05 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 500 : 10.50 : +- 0.20 |
| Rated speed rpm | : 500 |
| Pressure hPa rack travel mm Tolerance mm | : 320 : 11.30 : +- 0.15 |
| Pressure hPa rack travel mm Tolerance mm | : 470 : 12.20 : + 0.05 |
| FUEL DELIVERY CHA | RACTERISTICS |
| Aneroid pressure hPa Rated speed rpm Del. quantity | : - : 1000 |
| cm3/1000 strokes Tolerance | : 235.0 |
| cm3/1000 strokes Check tolerance | : +- 4.0 |
| cm3/1000s. | : +- 6.0 |
| Aneroid pressure hPa Rated speed rpm | : – : 500 |
| Del. quantity cm3/1000 strokes | : 144.0 |
| Tolerance cm3/1000 strokes | : + 2.0 |
| Check tolerance cm3/1000s. | : +- 4.0 |

Rack travel in mm : 13.40
Rated speed rpm : 1045
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.50
Tolerance mm : +- 0.20
Del. quantity
cm3/1000 strokes : 140.0
Tolerance
cm3/1000 strokes : +- 20.0
Check tolerance
cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : rack travel mm : 225 4.80 Tolerance mm : +- 0.30 Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.12.94 Test oil : ISO 4113

Combination No. : 0402676822

Injection pump

Pump designation : PE6P120A320RS7365

EP type number : 0412626940

Governor

Governer design. : RSV300...850P4A594

Governer no. : 0421833460

Cust. part No. : 11031890 PO2 950103

Customer-spec. information

Customer : VME

Motor : TD 122 KKE

Power KW : 220.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2417413078

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : +- 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance "NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

| Rated speed rpm : 700 + | Del. quantity cm3/1000 strokes : 254.0 |
|--|---|
| Rack travel in mm: 9.40 + Tolerance mm: + 0.05 | Tolerance cm3/1000 strokes : +- 1.0 Check tolerance |
| Del. quantity cm3/1000 strokes : 254.0 | cm3/1000S. : +- 4.0 Spreed Tolerance |
| Tolerance cm3/1000 strokes : + 1.0 | cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 |
| Check tolerance + 4.0 + | RATED SPEED |
| Spreed | |
| Tolerance cm3/1000 strokes : 6.0 | control lever position degree : 56.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. : 10.0 | control lever position degree : 106.0 |
| Del. quantity cm3/1000 strokes : 45.0 | tolerance degree : +- 4.0 rack travel mm : 8.40 |
| cm3/1000 strokes : +- 3.0 +- Check tolerance +- | Rated speed rpm : 870 Tolerance 1/min : +- 5 |
| cm3/1000S. : + 6.0 + 5preed + Tolerance | rack travel mm : 4.00 Rated speed rpm : 930 |
| cm3/1000 strokes : 7.0 + Check tolerance cm3/1000s. : 11.0 + | Toterance 1/min : +- 15 |
| + | rack travel mm : 0.80 Tolerance mm : +- 0.50 Rated speed rpm : 1070 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | LOW IDLE |
| + | |
| GUIDE SLEEVE POSITION | tolerance degree : +- 4.0 tolerance degree : +- 4.0 |
| + | Setting point w/out bumper spring |
| control lever position degree : -3 Rated speed rpm : 800 | Rated speed rpm : 330 |
| Rack travel in mm : 0.50 Tolerance mm : +- 0.20 | Testing: Rated speed rpm : 330 |
| governor spring | Tolerance mm : +- 0.20 |
| pre-tension click setting x : 6.00 | rack travel mm : 2.00 Tolerance 1/min : +- 30 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | TORQUE CONTROL |
| Rated speed rpm : 700 Aneroid pressure | Rated speed rpm : 700 rack travel mm : 8.80 |
| hPa : 1500 + | Tolerance mm : + 0.10 |

ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 1500 Pressure hPa 9.40 rack travel mm 0.05 Tolerance mm **MEASUREMENT** Pressure hPa 500 Rated speed rom 7.10 rack travel mm 0.10 Tolerance mm 500 Rated speed rpm 600 Pressure hPa 2.00 rack travel mm 0.20 Tolerance mm Pressure hPa 260 0.25 rack travel mm Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure Rated speed rpm 700 Del. quantity cm3/1000 strokes : 251.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes 9.0 Check tolerance cm3/1000s. 13.0 Aneroid pressure Rated speed rpm 700 Del. quantity cm3/1000 strokes : 196.0 Tolerance cm3/1000 strokes 1.0 Check tolerance

4.0

BREAKAWAY

Rack travel in mm : 8.40
Rated speed rpm : 870
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Del. quantity cm3/1000 strokes 45.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes 7.0 Check tolerance cm3/1000s. 11.0

cm3/1000s.

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 13.01.95 : ISO 4113

Combination No. : 0402735811

Injection pump

Pump designation : PES5P120A720/3LS7348

EP type number

: 0412725818

Governor

Governer design. : RQ325/1000PA1106-2

Governer no.

: 0421801750

Cust. part No. : 3-7392

Customer-spec. information

Customer

: MAN

: D2865LUH06 Motor

Power KW

: 191.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve

: 1417413025

Inlet press. bar

Tolerance bar

: + 0.1

Test nozzle holde

assembly

: 1688901105

Opening pressure

bar

Tolerance bar

208.5

: + 1.5

Lube oil

: 1409918004

Test lines

: 1680750089

Outside diameter :

8.0

x inside diameter :

3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm

Tolerance mm

: +- 0.05

test only

: + - 0.10

Rack travel in mm : 12.80

Tolerance mm

: +- 0.50

Firing order

: 1-3-5-4-2

Phasing

: 0-72-144-216-288

Tolerance Check

: +- 0.30

tolerance °NW

 $: \leftarrow 0.75$

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : S.o.d. blocking

Barrel no.

5

BASIC SETTING

Rated speed rpm

750

Rack travel in mm :

12.10

Tolerance mm

: +- 0.05

| Del. quantity cm3/1000 strokes : 2 | 261.0 | guide sleeve travel mm : 7.00 Tolerance mm : + 0.10 |
|--|---------------|---|
| Tolerance cm3/1000 strokes : +- | 1.0 | Rated speed rpm : 1210 |
| Check tolerance cm3/1000s. : +- | 4.0 | guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50 |
| Spreed | I | |
| Tolerance cm3/1000 strokes : | 8.0 | GUIDE SLEEVE POSITION Rated speed rpm : 700 |
| Check tolerance | | nated speed (pill : 100 |
| | 12.0 | Rack travel in mm : 15.50 Tolerance mm : +- 0.80 |
| 2nd speed rpm : 3 | 325 | Total units in an in a second |
| Tolerance mm : +- | 4.90 0.20 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Del. quantity | + | Rated speed rpm : 750 |
| cm3/1000 strokes : Tolerance | 43.0 | Aneroid pressure hPa : 2000 |
| cm3/1000 strokes : +- | 3.0 | Del. quantity |
| Check tolerance | + | cm3/1000 strokes : 261.0 |
| cm3/1000s. : +- | 6.0 | Tolerance |
| Spreed Tolerance | Ī | cm3/1000 strokes : +- 1.0 Check tolerance |
| cm3/1000 strokes : | 8.0 | cm3/1000s. : +- 4.0 |
| Check tolerance | + | Spreed |
| cm3/1000s. : | 12.0 | Tolerance cm3/1000 strokes : 8.0 |
| | + | Check tolerance |
| (B) SETTING OF INJECTION WITH GOVERNOR | 1 PUMP + | cm3/1000s. : 12.0 |
| | ‡ | RATED SPEED |
| GUIDE SLEEVE TRAVEL | + | |
| | 525 | control lever |
| guide sleeve | 3.50 | position degree : 100.0 |
| travel mm : +- | ₹.50 0.10 | tolerance degree : +- 4.0 |
| rocci di ce min | 1 | rack travel mm : 11.10 |
| | 159 | Rated speed rpm : 1053 |
| guide sleeve travel mm : | 7.34 | Tolerance 1/min : +- 8 |
| | 0.10 | rack travel mm : 4.00 |
| | + | Rated speed rpm : 1130 |
| | 100 + | Tolerance 1/min : +- 15 |
| guide sleeve travel mm : | 7.00 | rack travel mm : 0.50 |
| | 0.10 | Tolerance mm : +- 0.50 Rated speed rpm : 1250 |
| Rated speed rpm : 4 guide sleeve | 01 | nateu speeu (piii . (C)U |
| | 4.29 | LOW IDLE |
| Tolerance mm : +- | | |
| Rated speed rpm : 5 | 30 ‡ | |

| | + Tolerance mm : +- 0.10 |
|--|--|
| control lever position degree : 73.0 tolerance degree : +- 4.0 | Pressure hPa : 500 rack travel mm : 10.40 Tolerance mm : + 0.15 |
| Testing: | |
| Rated speed rpm : 325 rack travel mm : 4.90 Tolerance mm : +- 0.10 | FUEL DELIVERY CHARACTERISTICS |
| rack travel mm : 2.00 Rated speed rpm : 390 Tolerance 1/min : +- 20 | Aneroid pressure hPa : 2000 Rated speed rpm : 1000 Del. quantity |
| Rated speed rpm : 200 | + cm3/1000 strokes : 241.0 + Tolerance |
| CRT mm min. : > 8.00 | cm3/1000 strokes : +- 3.0 Check tolerance |
| | + cm3/1000s. : +- 6.0 + Spreed |
| TORQUE CONTROL | Tolerance cm3/1000 strokes : 8.0 |
| Rated speed rpm : 750 rack travel mm : 12.10 Tolerance mm : +- 0.05 | Check tolerance cm3/1000s. : 12.0 |
| Rated speed rpm : 1000 | Aneroid pressure hPa : 750 |
| rack travel mm : 12.10 Tolerance mm : + 0.10 | Rated speed rpm : 550 |
| | Del. quantity cm3/1000 strokes : 235.0 |
| Rated speed rpm : 550 rack travel mm : 10.80 Tolerance mm : +- 0.10 | <pre>+ Tolerance + cm3/1000 strokes : +- 2.0 + Check tolerance</pre> |
| Total disc limit | cm3/1000s. : +- 5.0 |
| ANEROID/ALTITUDE COMPENSATOR TEST | Aneroid pressure |
| CON ENDATOR TEST | Rated speed rpm : 500 |
| SETTING | Del. quantity cm3/1000 strokes : 159.0 |
| Rated speed rpm : 500 | + Tolerance + cm3/1000 strokes : ← 1.0 |
| Pressure hPa : 750 rack travel mm : 10.80 | + Check tolerance + cm3/1000s. : +- 4.0 |
| Tolerance mm : + 0.10 | |
| MEASUREMENT | BREAKAWAY |
| Rated speed rpm : 500 | Pools troval in mr. 11 10 |
| Pressure hPa : 250 | Rack travel in mm : 11.10 Rated speed rpm : 1053 |
| rack travel mm : 8.75 Tolerance mm : +- 0.05 | + Tolerance 1/min : + 8 |
| Pressure hPa : 2000 | Ţ |
| Pressure hPa : 2000 rack travel mm : 12.10 Tolerance mm : +- 0.05 | STARTING FUEL DELIVERY |
| Pressure hPa : 1000 rack travel mm : 11.05 | Rated speed rpm : 100 rack travel mm : 8.35 Tolerance mm : + 0.20 |
| H23 | T TOLET ALIVE HAIT . TO U.ZU |
| 116.0 | |

Del. quantity cm3/1000 strokes : 80.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm rack travel mm 325 4.90 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 43.0 Tolerance 3.0 cm3/1000 strokes Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 12.12.94 Edition : TSO 4113 Test oil Combination No. : 0402736803 Injection pump Pump designation : PES6P110A120RS7187 EP type number : 0412716801 Governor Governer design. : RQV350...1100PA924 ; -3K Governer no. : 0421815228 Cust. part No. : Customer-spec. information Customer : CDC Motor : 6CTA TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 2417413047 Overflow quantity min. L/h 165 : +- 5.0 Tolerance t/h Test nozzle holde : 1688901101 assembly Opening pressure 208.5 Tolerance bar : +- 1.5 Test lines : 1680750008

```
x inside diameter :
                       2.0
                     600
x length mm :
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____
BEGINNING OF DELIVERY
Test pressure bar :
                     31.0
Tolerance bar : +- 1.0
Prestroke mm
                 : 4.40
                 : + 0.05
Tolerance mm
test only
                 : + - 0.10
Rack travel in mm: 10.50
                 : + 1.50
Tolerance mm
Firing order
                 : 1-5-3-6-2-
                 : 4
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : + - 0.30
Check
tolerance °NW
                : +- 0.50
BEGINNING OF DELIVERY DIFFERENCE
                : + 0.10
Tolerance
Check
tolerance "NW
                : + 0.23
BASIC SETTING
Rated speed rpm
                    1100
Rack travel in mm :
                     10.45
Tolerance mm
                : +- 0.05
Del. quantity
cm3/1000 strokes :
                     138.0
```

Outside diameter :

6.0

| Tolerance cm3/1000 strokes : +- 1.0 | Rated speed rpm : 1215 Tolerance 1/min : +- 15 |
|--|---|
| Check tolerance cm3/1000s. : + 4.0 | rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1350 |
| Spreed Tolerance cm3/1000 strokes : 5.0 | LOW IDLE |
| Check tolerance cm3/1000s. : 9.0 | control lever position degree : 15.0 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | tolerance degree : +- 4.0 Testing: |
| GUIDE SLEEVE POSITION | Rated speed rpm : 350 rack travel mm : 4.70 Tolerance mm : +- 0.10 |
| control lever position degree : -1 Rated speed rpm : 1230 | CONTINUOUS-ACTION CONTROL |
| - | Rated speed rpm : 400 |
| Rack travel in mm: 9.00 + Tolerance mm: + 3.00 | TORQUE CONTROL |
| FULL LOAD DELIVERY AT FULL LOAD STOP | Rated speed rpm : 1100 rack travel mm : 10.45 Tolerance mm : +- 0.05 |
| Rated speed rpm : 1100 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 138.0 | Rated speed rpm : 900 rack travel mm : 10.20 Tolerance mm : + 0.10 |
| Tolerance cm3/1000strokes: 130.0 + 1 | Rated speed rpm : 650 rack travel mm : 4.95 Tolerance mm : + 4.95 |
| Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance | ANEROID/ALTITUDE COMPENSATOR TEST |
| cm3/1000s. : 9.0 | SETTING |
| RATED SPEED | Rated speed rpm : 1100 Pressure hPa : 900 rack travel mm : 10.45 Tolerance mm : +- 0.05 |
| control lever position degree : 60.0 tolerance degree : + 4.0 | Tolerance mm : +- 0.05 MEASUREMENT |
| rack travel mm : 9.40 Rated speed rpm : 1145 Tolerance 1/min : + 5 | Pressure hPa : - Rated speed rpm : 1î00 rack travel mm : 6.90 Tolerance mm : + 0.20 |
| rack travel mm : 4.00 | Tolerance mm : +- 0.20 |

H26

Rated speed rpm : 1100

Pressure hPa : 330 rack travel mm : 8.60 Tolerance mm : +- 0.20

Pressure hPa : 200 rack travel mm : 7.45 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 88.0 Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance cm3/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 9.40
Rated speed rpm : 1145
Tolerance 1/min : +- 5

| BOSCH INJ. PUMP TEST SPECIFICATIONS | | | | | |
|--|--|--|--|--|--|
| Note remarks | | | | | |
| adjustment instru | Refer to Service Info for test and adjustment instructions. See microcard(s) W400/ | | | | |
| Edition Test oil | : 12.12.94 : ISO 4113 | | | | |
| Combination No. | : 0402736805 | | | | |
| Injection pump Pump drsignation EP type number | : PES6P120A120RS7206 : 0412726835 | | | | |
| Governor Governer design. | : RQV3501100PA924 : -5K | | | | |
| Governer no. | : 0421815250 | | | | |
| Cust. part No. | : 3281182 | | | | |
| Customer Motor Power KW | Motor : 6CTAA | | | | |
| TEST BENCH REQUIR | EMENTS | | | | |
| Test oil inlet temp. °C Tolerance °C | : 40 : +- 2.0 | | | | |
| Overflow valve | : 1417413047 | | | | |
| Overflow quantity min. l/h Tolerance l/h | : 165 : ← 5.0 | | | | |
| Test nozzle holde assembly | : 1688901101 | | | | |
| Opening pressure par Tolerance bar | : 208.5 : +- 1.5 | | | | |
| Test lines | : 1680750008 | | | | |
| Outside diameter | : 6.0 | | | | |
| | | | | | |

H28

```
x inside diameter : 2 x length mm : 600
                         2.0
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____
BEGINNING OF DELIVERY
Test pressure bar : 31.0 Tolerance bar : + 1.0
Prestroke mm : 3.55
Tolerance mm : +- 0.05
test only : \leftarrow 0.10
Rack travel in mm: 10.50
Tolerance mm : ← 1.50
Firing order : 1-5-3-6-2-
Phasing : 0-60-120-180-240
                 : -300
               : +- 0.30
Tolerance
Check
tolerance °NW : +- 0.50
BEGINNING OF DELIVERY DIFFERENCE
S.o.d. blocking
S.o.d. Divining
Barrel no. : 1
Talarance : + 0.10
Check
tolerance ^{\circ}NW : + 0.23
BASIC SETTING
Rated speed rpm : 1100
Rack travel in mm : 12.15
Tolerance mm : \leftarrow 0.05
Del. quantity
cm3/1000 strokes : 159.0
```

| | rack travel mm : 4.00 |
|--|--|
| Tolerance cm3/1000 strokes : +- 1.0 | Rated speed rpm : 1275 Tolerance 1/min : +- 15 |
| CIID/ TODO STROKES : +- 1.0 | Tolerance 1/min : +- 15 |
| Check tolerance | rack travel mm : 0.50 |
| cm3/1000s. : +- 4.0 | Tolerance mm : + 0.50 |
| | Rated speed rpm : 1350 |
| Spreed | - |
| Tolerance | |
| cm3/1000 strokes : 5.0 | LOW IDLE |
| Check tolerance | Ť |
| cm3/1000s. : 9.0 | control lever |
| . 7.0 | position degree : 75.0 |
| | tolerance degree : +- 4.0 |
| (B) SETTING OF INJECTION PUMP | + |
| WITH GOVERNOR | Testing: |
| • | + |
| • | Rated speed rpm : 350 |
| CHINE OF EDUC DACITION | rack travel mm : 5.30 Tolerance mm : + 0.10 |
| GUIDE SLEEVE POSITION | tolerance mm : + 0.10 |
| | Rated speed rpm : 250 |
| control lever | Traced Speed Paris . 230 |
| position degree : -1 - Rated speed rpm : 1420 - | CRT mm min. : > 6.80 |
| Rated speed rpm : 1420 - | |
| 0.00 | |
| Rack travel in mm: 9.00 - Tolerance mm: + 3.00 - | CONTINUOUS-ACTION CONTROL |
| ioterance min : += 5.00 | Rated speed rpm : 450 |
| | Nated speed (pill : 450 |
| FULL LOAD DELIVERY AT FULL LOAD STOP - | |
| <u>.</u> | TORQUE CONTROL |
| Rated speed rpm : 1100 - | • |
| Aneroid pressure | Rated speed rpm : 1100 |
| hPa : 1200 - | rack travel mm : 12.15 |
| Del. quantity - cm3/1000 strokes : 159.0 - | Tolerance mm : +- 0.05 |
| Tolerance | Rated speed rpm : 600 |
| cm3/1000 strokes : +- 1.0 | rack travel mm : 11.20 |
| Check tolerance | Tolerance mm : + 0.10 |
| cm3/1000s. : +- 4.0 | - Cocor across main |
| Spreed - | Rated speed rpm : 800 |
| Tolerance | rack travel mm : 11.80 Tolerance mm : +- 0.10 |
| cm3/1000 strokes : 5.0 | - Tolerance mm : +- 0.10 |
| Check tolerance | • |
| cm3/1000s. : 9.0 | ANICOATO / AL TITO INC |
| | - ANEROID/ALTITUDE - COMPENSATOR TEST |
| RATED SPEED | COMPENSATOR (ES) |
| 101125 07 225 | _ |
| - | - SETTING |
| control lever | |
| position degree : 115.0 | - Rated speed rpm : 1100 |
| tolerance degree : +- 4.0 | - Pressure hPa : 1200 |
| noak + novel | rack travel mm : 12.15 |
| rack travel mm : 11.10 | - Tolerance mm : +- 0.05 |
| Rated speed rpm : 1145 Tolerance 1/min : +- 5 | - MEASUREMENT |
| TOTAL CHART . TO J | FILASUREFIERE |
| 7 | |

| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 1100 : 8.20 : +- 0.10 |
|--|---|
| Rated speed rpm | : 1100 |
| Pressure hPa rack travel mm Tolerance mm | : 300 : 8.90 : +- 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 600 : 11.20 : +- 0.10 |
| START CUT-OUT | |
| Rated speed rpm Check | : > 100 |
| speed 1/min Rated speed rpm Check | : > 80 : < 270 |
| speed 1/min | : < 290 |
| Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed | : 177.0 : + 3.0 : + 6.0 |
| Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : 8.0 : 12.0 |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : - : 500 : 107.0 : + 2.0 : + 4.0 |
| BREAKAWAY | |
| Rack travel in mm Rated speed rpm Tolerance 1/min | : 11.10 : 1145 : + 5 |

STARTING FUEL DELIVERY

Rated speed rpm : Del. quantity cm3/1000 strokes : 100 245.0

Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0

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BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 12.12.94 : ISO 4113 Test oil

Combination No. : 0402736810

Injection pump

Pump designation : PES6P110A120RS7213

EP type number : 0412716804

Governor

Governer design. : RQV400...1250PA964

: -2K

: 0421815254 Governer no.

Cust. part No. : 3921777

Customer-spec. information

Customer : CDC

: 6BTA-A Motor

: 141.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : 1.5

Overflow quantity

min. L/h 120

Tolerance 1/h : **←** 5.0

Test nozzle holde

: 1688901101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5 Test Lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm : 4.40 : +- 0.05 Tolerance mm

test only : ← 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

S.o.d. blocking

Barrel no.

Tolerance : +- 0.10

Check

tolerance °NW : + - 0.23

| | | † Tolerance + cm3/1000 strokes : + 1.0 |
|---|---------------------------------|---|
| ASIC SETTING | | Check tolerance |
| lated aread row | 1250 | + cm3/1000s. : $+$ 4.0 |
| ated speed rpm | : 1250 | Spreed Tolerance |
| | | cm3/1000 strokes : 5.0 |
| Rack travel in mm | | + Check tolerance |
| Tolerance mm | : ← 0.05 | - cm3/1000s. : 9.0 |
| Del. quantity cm3/1000 strokes | : 161.0 | RATED SPEED |
| | | _ + |
| Tolerance cm3/1000 strokes | 10 | t control lever |
| JIID/ 1000 STIOKES | : 1.0 | _ + position degree : 63.0 |
| Check tolerance | | tolerance degree : +- 4.0 |
| | : +- 4.0 | + |
| Canad | | _ + control lever |
| Spreed Tolerance | | position degree : 119.0 |
| cm3/1000 strokes | : 5.0 | tolerance degree : +- 4.0 |
| | | _ + rack travel mm : 13.80 |
| Check tolerance | | Rated speed rpm : 1300 |
| cm3/1000s. | : 9.0 | Tolerance 1/min : + 5 |
| Del. quantity | | T rack travel mm · 4.00 |
| cm3/1000 strokes | : 36.D | rack travel mm : 4.00 Rated speed rpm : 1475 |
| Tolerance | | + Tolerance 1/min : + 15 |
| cm3/1000 strokes | : +- 3.0 | + |
| Check tolerance | | + rack travel mm : 0.50 |
| cm3/1000s. Spreed | : +- 5.0 | + Tolerance mm : + 0.50 + Rated speed rpm : 1600 |
| Tolerance | | T Nated Speed (pill : 1000 |
| cm3/1000 strokes | : 8.0 | + |
| Check tolerance | 42.0 | + LOW IDLE |
| cm3/1000s. | : 12.0 | † |
| | | T control lever |
| (B) SETTING OF INJ | ECTION PUMP | position degree : 71.0 |
| WITH GOVERNOR | | tolerance degree : + 4.0 |
| | | + + control lever |
| | | position degree : 15.0 |
| SUIDE SLEEVE POSIT | ION | tolerance degree : +- 4.0 |
| Rated speed rpm | : 1450 | Testing: |
| Onale democrat dan ann | • 13 80 | Rated speed rpm : 400 |
| AND LUMBS IN THE | . ,,,,,, | rack travel mm : 5.50 Tolerance mm : + 0.10 |
| olerance mm | : +- 1.30 | 1 2.20 |
| Tolerance mm | : ← 1.30 | † Tolerance mm : + 0.10 |
| Tolerance mm | | + |
| Rack travel in mm Tolerance mm | AT FULL LOAD STOP | Tolerance mm : + 0.10 Rated speed rpm : 275 |
| Folerance mm FULL LOAD DELIVERY Rated speed rpm | AT FULL LOAD STOP: 1250 | + |
| Folerance mm FULL LOAD DELIVERY Rated speed rpm Aneroid pressure | AT FULL LOAD STOP: 1250 | Rated speed rpm : 275 |
| Folerance mm FULL LOAD DELIVERY Rated speed rpm Aneroid pressure | AT FULL LOAD STOP: 1250 | Rated speed rpm : 275 CRT mm min. :> 7.20 |
| Folerance mm FULL LOAD DELIVERY Rated speed rpm Aneroid pressure | AT FULL LOAD STOP : 1250 : 1200 | Rated speed rpm : 275 |

| | | + Tolerance |
|---|-------------------------------|--|
| TORQUE CONTROL | | cm3/1000 strokes : 8.0 Check tolerance |
| | | cm3/1000s. : 12.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 1250 : 14.85 : ← 0.05 | Aneroid pressure hPa : - |
| Pated speed rom | . 800 | + Rated speed rpm : 500 + Del. quantity |
| ated speed rpm ack travel mm olerance mm | : 13.10 : +- 0.10 | cm3/1000 strokes : 97.5 Tolerance |
| | | + cm3/1000 strokes : +- 2.0 |
| EROID/ALTITUDE MPENSATOR TEST | | Check tolerance cm3/1000s. : +- 4.0 |
| TING | | BREAKAWAY |
| ed speed rpm ssure hPa k travel mm erance mm | : 14.85 | Rack travel in mm : 13.80 Rated speed rpm : 1300 Tolerance 1/min : +- 5 |
| SUREMENT | | <u> </u> |
| ed speed rpm | : 1250 | + STARTING FUEL DELIVERY |
| re hPa ravel mm | : 690 : 13.40 : +- 0.20 | Rated speed rpm : 100 rack travel mm : 12.50 Tolerance mm · : + 0.50 Del. quantity |
| | | + cm3/1000 strokes : 155.0 |
| enra avelmm | : 365 : 10.25 : +- 0.05 | + Tolerance + cm3/1000 strokes : +- 20.0 |
| e mm | : +- 0.05 | + Check tolerance + cm3/1000s. : ← 25.0 |
| CUT-OUT | | ‡ |
| ed speed rpm k | : > 100 | LOW IDLE |
| d 1/min | | + |
| ispeed rpm | | + Del. quantity + cm3/1000 strokes : 36.0 |
| 1/min | : < 300 | + Tolerance + cm3/1000 strokes : +- 3.0 |
| ELIVERY CHA | ARACTERISTICS | + Check tolerance + cm3/1000s. : + 5.0 + Spreed |
| d pressure | 4000 | + Tolerance |
| speed rpm | : 1200 : 800 | + cm3/1000 strokes : 8.0 + Check tolerance |
| uantity | : 161.0 | cm3/1000s. : 12.0 |
| ce | | Į |
| 00 strokes tolerance | : ← 3.0 | <u> </u> |
| 1 () 1 (-) 1 () | | I |

| | | 1 | |
|---|--|---|-------------|
| BOSCH INJ. PUMP T | TEST SPECIFICATIONS | Test lines : 1680750008 | |
| Note remarks | | Outside diameter : 6.0 | |
| Refer to Service adjustment instru See microcard(s) | Info for test and octions. W400/ | x inside diameter: 2.0 x length mm : 600 | |
| Edition Test oil | : 12.12.94 | | |
| Test oil | : ISO 4113 | REMARKS | |
| Combination No. | : 0402736811 | + | |
| injection pump | | (A) INJECTION PUMP SETTING VALUES | |
| ump designation | : PES6P110A120RS7213 | + Set equal delivery quant. | |
| P type number | : 0412716804 | per values | |
| Sovernor | : RQV4001250PA964 | DECIMINAC OF DELIVEDY | |
| overner design. | : RQV4001230PA964 : -3K | BEGINNING OF DELIVERY | |
| overner no. | | Test pressure bar : 31.0 | |
| | | Tolerance bar : + 1.0 | |
| ust. part No. | : 3921776 | - | |
| · | | Prestroke mm : 4.40 Tolerance mm : +- 0.05 | |
| | | Tolerance mm : +- 0.05 | |
| ustomer-spec. in | formation | test only : +- 0.10 | |
| ustomer | : CDC | + | |
| rtor | : OBIA-A | Rack travel in mm : 10.50 | |
| wer KW | : 147.0 | Tolerance mm : +- 1.50 | |
| | | Firing order : 1-5-3-6- | 2- |
| ST BENCH REQUIR | EMENTS | : 4 | |
| est oil inlet | | † | |
| emp. °C | : 40 | Phasing : 0-60-120-180-2 | 40 |
| olerance °C | : +- 2.0 | : -300 | |
| | | Tolerance : + 0.30 Check | |
| erflow valve | : 1417413047 | tolerance °NW : +- 0.50 | |
| | | † | |
| let press. bar | : 1.5 | BEGINNING OF DELIVERY DIFFERENCE | |
| erflow quantity | | † - S.o.d. blocking | |
| n, l/h | : 120 | Barrel no. : 1 | |
| lerance L/h | : - 5.0 | Tolerance : + 0.10 | |
| | | - Check | |
| | - | tolerance °NW : +- 0.23 | |
| est nozzle holde sembly | : 1688901101 | İ | |
| osembly | . 1000701101 | BASIC SETTING | |
| pening pressure | | 1 | |
| ar | : 208.5 | Rated speed rpm : 1250 | |
| lerance bar | : ← 1.5 | | |
| | | t Rack travel in mm : 14.85 | |
| | | בטידו וואוו זון טטאוט וועטטיין אינטטיין | |

| Toterance mm : ← 0.05 | + rack travel mm : 4.00 + Rated speed rpm : 1475 + Tolerance 1/min : +- 15 |
|---|---|
| Del. quantity cm3/1000 strokes : 159.5 | + |
| Tolerance cm3/1000 strokes : +- 1.0 | rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1600 |
| Check tolerance cm3/1000s. : + 4.0 | LOW IDLE |
| Spreed Tolerance cm3/1000 strokes : 5.0 | control lever position degree : 16.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. : 9.0 | Testing: |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | Rated speed rpm : 400 rack travel mm : 5.60 Tolerance mm : +- 0.10 |
| | Rated speed rpm : 275 |
| GUIDE SLEEVE POSITION | CRT mm min. : > 7.20 |
| control lever position degree : - 1 | CONTINUOUS-ACTION CONTROL |
| | Rated speed rpm : 423 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | TORQUE CONTROL |
| Rated speed rpm : 1250 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.5 | Rated speed rpm : 1250 - rack travel mm : 14.85 - Tolerance mm : + 0.05 |
| Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed | Rated speed rpm : 800 - rack travel mm : 13.30 - Tolerance mm : +- 0.10 |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance | ANEROID/ALTITUDE COMPENSATOR TEST |
| cm3/1000s. : 9.0 | SETTING Rated speed rpm : 1250 |
| RATED SPEED | + Pressure hPa : 1200 + rack travel mm : 14.85 |
| control lever position degree : 60.0 tolerance degree : +- 4.0 | Tolerance mm : +- 0.05 MEASUREMENT |
| rack travel mm : 13.80 Rated speed rpm : 1295 Tolerance 1/min : +- 5 | Pressure hPa : - Rated speed rpm : 1250 rack travel mm : 8.40 Tolerance mm : + 0.20 |

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| Rated speed rpm | : 1250 |
|---|---|
| Pressure hPa rack travel mm Tolerance mm | : 755 : 13.90 : ← 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 410 : 10.65 : ← 0.05 |
| START CUT-OUT | |
| Rated speed rpm Check | : > 100 |
| speed 1/min Rated speed rpm | : > 80 : < 290 |
| Check speed 1/min | : < 300 |
| FUEL DELIVERY CHA | RACTERISTICS |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : 159.5 : + 3.0 : + 6.0 : 8.0 : 12.0 : 500 : 92.0 |
| BREAKAWAY | |
| Rack travel in mm Rated speed rpm Tolerance 1/min | : 1295 |

Rated speed rpm : 100
rack travel mm : 12.40
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 155.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 25.0

| POSCH TNI PIMP T | TEST SPECIFICATIONS + | Test Lines : 1680750008 |
|---|--------------------------------------|--|
| Note remarks | 20. 0. 201. 10.7710.70 | Outside diameter : 6.0 |
| Note reliants | Ī | outside diameter : 6.0 |
| Refer to Service adjustment instru See microcard(s) | Info for test and + ctions. + w400/ | x inside diameter: 2.0 x length mm : 600 |
| Edition | : 12.12.94 I | |
| Test oil | : ISO 4113 | REMARKS |
| Combination No. | : 0402736812 | |
| Injection pump Pump designation EP type number | : PES6P110A120RS7214 : 0412716805 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Governor | 701/750 420004044 | |
| | : RQV3501200PA964 : -4K | BEGINNING OF DELIVERY |
| Governer no. | : 0421815256 | Test pressure bar : 31.0 |
| | Į | Tolerance bar : +- 1.0 |
| Cust. part No. | : 3921774 | |
| | | Prestroke mm : 4.40 Tolerance mm : +- 0.05 |
| Customer—spec. in | formation | |
| Customer Motor | : CDC + | test only : \leftarrow 0.10 |
| Power KW | : 156.0 | Rack travel in mm : 10.50 Tolerance mm : +- 1.50 |
| TEST BENCH REQUIR | EMENTS | Firing order : 1-5-3-6-2- |
| Test oil inlet | † | |
| temp. °C | : 40 I | |
| Tolerance °C | : + 2.0 + | Phasing : 0-60-120-180-240 |
| | 1 | : -300 Tolerance : +- 0.30 |
| Overflow valve | : 1417413047 | Check |
| | + | tolerance °NW : + 0.50 |
| Inlet press. bar | : 1.5 | |
| • | + | BEGINNING OF DELIVERY DIFFERENCE |
| Overflow quantity min. L/h | : 120 | |
| Tolerance l/h | : + 5.0 | |
| | + | Time to cyl. no. : 1 |
| Test nozzle holde | † | S.o.d. blocking |
| assembly | : 1688901101 | Barrel no. : 1 Tolerance : + 0.10 |
| • | + | Check |
| Opening pressure | : 208.5 | tolerance "NW : +- 0.23 |
| bar Tolerance bar | : + 1.5 | |
| | + | BASIC SETTING |
| | + | |
| | | |

| Rated speed rpm | : 1200 | - - control lever | |
|---|----------------------|--|-----------------------------|
| Rack travel in mm Tolerance mm | : 12.35 : + 0.05 | - position degree - tolerance degree | : 119.0 : + 4.0 |
| Del. quantity cm3/1000 strokes | | rack travel mm Rated speed rpm Tolerance 1/min | : 11.30 : 1250 : + 5 |
| Tolerance cm3/1000 strokes | : + 1.0 | rack travel mm Rated speed rpm Tolerance 1/min | : 1380 |
| Check tolerance cm3/1000s. | : +- 4.0 | - rack travel mm - Tolerance mm | : 0.50 : +- 0.50 |
| Spreed Tolerance cm3/1000 strokes | : 5.0 | - Rated speed rpm | |
| Check tolerance | | LOW IDLE | |
| cm3/1000S. (B) SETTING OF INJ | : 9.0 ECTION PUMP | control lever position degree tolerance degree | : 65.0 : +- 4.0 |
| WITH GOVERNOR | 1 | · Testing: | |
| GUIDE SLEEVE POSIT | TION | Rated speed rpm rack travel mm Tolerance mm | : 350 : 5.50 : + 0.10 |
| control lever position degree | : - 1 | - Rated speed rpm | : 275 |
| | : 1260 | CRT mm min. | : > 7.20 |
| Rack travel in mm Tolerance mm | : 16.50 : + 1.30 | CONTINUOUS-ACTION | CONTROL |
| FULL LOAD DELIVERY | AT FULL LOAD STOP | Rated speed rpm | : 423 |
| Rated speed rpm Aneroid pressure | + | TORQUE CONTROL | |
| hPa Del. quantity | : 1200 | Rated speed rpm rack travel mm | : 12.35 |
| cm3/1000 strokes Tolerance | + | Tolerance mm | |
| cm3/1000 strokes Check tolerance cm3/1000s. | : +- 1.0 : +- 4.0 | Rated speed rpm rack travel mm Tolerance mm | : 11.10 |
| Spreed Tolerance | 1 | Rated speed rpm | |
| cm3/1000 strokes Check tolerance | + | rack travel mm Tolerance mm | : 11.00 |
| cm3/1000s. | : 9.0 | | · |
| RATED SPEED | <u></u> | ANEROID/ALTITUDE COMPENSATOR TEST | |

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SETTING

Rated speed rpm : 1200
Pressure hPa : 1200
rack travel mm : 12.35
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 1200
rack travel mm : 7.90
Tolerance mm : + 0.20

Rated speed rpm : 1200

Pressure hPa : 575
rack travel mm : 11.40
Tolerance mm : + 0.20

Pressure hPa : 225 rack travel mm : 8.95 Tolerance mm : + 0.05

START CUT-OUT

Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 290 Check speed 1/min : < 300

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1200
Rated speed rpm : 650
Del. quantity
cm3/1000 strokes : 154.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. : 12.0

Aneroid pressure

hPa : -Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 88.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.30
Rated speed rpm : 1250
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 155.0

Tolerance cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s. : +- 25.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Test Lines : 1680750008 Outside diameter : Note remarks Refer to Service Info for test and x inside diameter : adjustment instructions. x Length mm : See microcard(s) W400/... Edition : 12.12.94 Test oil : ISO 4113 REMARKS Combination No. : 0402736823 Injection pump (A) INJECTION PUMP SETTING VALUES Pump designation : PES6P11DA12ORS7249 Set equal delivery quant. : 0412716807 EP type number per values ____ Governor Governer design. : RQV350...1150PA964 BEGINNING OF DELIVERY : -9K : 0421815295 Test pressure bar : Governer no. Tolerance bar : + 1.0 Cust. part No. : 3921970 Prestroke mm Tolerance mm : +- 0.05 Customer-spec. information test only : +- 0.10: CDC Customer Motor : 6CTA-A Rack travel in mm: 10.50 Power KW : 187.0 Tolerance mm : +- 1.50 : 1-5-3-6-2-Firing order TEST BENCH REQUIREMENTS Test oil inlet temo. °C 40 : 0-60-120-180-240 Phasing Tolerance °C : -300 : + 0.30Tolerance Check : 1419992198 : + 0.50Overflow valve tolerance "NW Inlet press. bar : 1.5 BEGINNING OF DELIVERY DIFFERENCE Overflow quantity min. l/h : 120 Tolerance L/h : +- 5.0 Tolerance Check Test nozzle holde tolerance °NW assembly : 1688901101 Opening pressure BASIC SETTING 208.5 Tolerance bar

6.0

2.0

| Rack travel in mm : 14.35 Tolerance mm : + 0.05 | Tolerance 1/min : + 5 rack travel mm : 4.00 |
|---|---|
| Del. quantity cm3/1000 strokes : 179.0 | Rated speed rpm : 1385 Tolerance 1/min : +- 15 |
| Tolerance cm3/1000 strokes : + 1.0 | rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1500 |
| Check tolerance cm3/1000s. : + 4.0 | LOW IDLE |
| Spreed Tolerance cm3/1000 strokes : 5.0 | control lever position degree : 15.0 tolerance degree : + 4.0 |
| Check tolerance cm3/1000s. : 9.0 | Testing: |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | Rated speed rpm : 350 rack travel mm : 5.50 Tolerance mm : + 0.10 |
| | Rated speed rpm : 275 |
| GUIDE SLEEVE POSITION | CRT mm min. : > 7.10 |
| control lever position degree : -1 | CONTINUOUS-ACTION CONTROL Rated speed rpm : 425 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | TORQUE CONTROL |
| Rated speed rpm : 1150 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 179.0 | Rated speed rpm : 1150 rack travel mm : 14.35 Tolerance mm : + 0.05 |
| Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed | Rated speed rpm : 650 rack travel mm : 11.80 Tolerance mm : + 0.20 |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 | ANEROID/ALTITUDE COMPENSATOR TEST |
| CIID7 100.55 7.0 | SETTING |
| RATED SPEED control lever | Rated speed rpm : 1150 Pressure hPa : 1200 rack travel mm : 14.35 Tolerance mm : + 0.05 |
| position degree : 65.0 tolerance degree : + 4.0 | MEASUREMENT |
| rack travel mm : 13.30 Rated speed rpm : 1205 | Pressure hPa : - Rated speed rpm : 1150 |

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| rack travel mm Tolerance mm | : 8.10 : ← 0.20 |
|--|---|
| Rated speed rpm | : 1150 |
| Pressure hPa rack travel mm Tolerance mm | : 860 : 13.40 : ← 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 320 : 9.65 : ← 0.05 |
| START CUT-OUT | |
| Rated speed rpm Check | : > 100 |
| speed 1/min Rated speed rpm | : > 80 : < 290 |
| Check | |
| speed 1/min FUEL DELIVERY CHA | : < 300 RACTERISTICS |
| speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm | |
| FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes | RACTERISTICS : 1200 : 650 |
| speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes | RACTERISTICS : 1200 : 650 : 168.5 |
| speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed | RACTERISTICS : 1200 : 650 : 168.5 |
| speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes | RACTERISTICS : 1200 : 650 : 168.5 : + 3.0 |
| speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance | RACTERISTICS : 1200 : 650 : 168.5 : + 3.0 : + 6.0 |
| speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm | RACTERISTICS : 1200 : 650 : 168.5 : + 3.0 : + 6.0 : 8.0 |
| speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes | RACTERISTICS : 1200 : 650 : 168.5 : + 3.0 : + 6.0 : 8.0 : 12.0 |
| speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance | RACTERISTICS : 1200 : 650 : 168.5 : + 3.0 : + 6.0 : 8.0 : 12.0 : - : 500 |

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm : 11.40 Tolerance mm : **←** 0.50 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : ← 25.0

Rack travel in mm : 13.30
Rated speed rpm : 1205
Tolerance 1/min : + 5

13.30

| Note remarks | TEST SPECIFICATIONS | x inside diameter: 2.0 x length mm : 600 |
|---|--|---|
| Refer to Service adjustment instru See microcard(s) | Info for test and actions. W400/ | REMARKS |
| Edition Test oil Combination No. | | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Injection pump Pump designation EP type number | : PES6P120A120RS7261 : 0412726876 | BEGINNING OF DELIVERY |
| Governor | : RQV3501100PA924 : -7K | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Governer no. | | Prestroke mm : 3.55 Tolerance mm : + 0.05 |
| Cust. part No. | : 3281842 | test only : +- 0.10 |
| | | Rack travel in mm : 10.50 Tolerance mm : +- 1.50 |
| Customer-spec. in Customer Motor Power KW | : CUMMINS | Firing order : 1-5-3-6-2 |
| TEST BENCH REQUIR | EMENTS | Phasing : 0-60-120-180-240 |
| Test oil inlet temp. °C Tolerance °C | : 40 : +- 2.0 | Tolerance : +- 0.30 Check tolerance °NW : +- 0.50 |
| Overflow valve | : 1417413047 | BEGINNING OF DELIVERY DIFFERENCE |
| Inlet press. bar | : 1.5 | + S.o.d. blocking + Barrel no. : 1 + Tolerance : +- 0.10 - Check |
| Test nozzle holde assembly | : 1688901101 | tolerance °NW : + 0.23 |
| Opening pressure bar Tolerance bar | : 208.5 : ← 1.5 | BASIC SETTING Rated speed rpm : 1100 |
| Test lines | : 1680750008 | Rack travel in mm : 12.05 Tolerance mm : + 0.05 |
| Outside diameter | : 6.0 | Del. quantity cm3/1000 strokes : 166.0 |

| Talanaa + | rack travel mm : 11.00 |
|---|--|
| Tolerance cm3/1000 strokes : +- 1.0 | - Rated speed rpm : 1145 - Tolerance 1/min : +- 5 |
| Check tolerance cm3/1000s. : +- 4.0 | rack travel mm : 4.00 Rated speed rpm : 1275 Tolerance 1/min : +- 15 |
| Spreed | • |
| Tolerance cm3/1000 strokes : 5.0 | - rack travel mm : 0.50 - Tolerance mm : +- 0.50 - Rated speed rpm : 1350 |
| Check tolerance : 9.0 | - LOW IDLE |
| (D) SETTING OF THEFETTON DUMP | • |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 70.0 tolerance degree : +- 4.0 |
| GUIDE SLEEVE POSITION | control lever position degree : 17.0 tolerance degree : +- 4.0 |
| control lever | |
| position degree : -1 Rated speed rpm : 1400 | Testing: |
| Rack travel in mm: 9.00 Tolerance mm: + 3.00 | Rated speed rpm : 350 rack travel mm : 4.90 Tolerance mm : + 0.10 |
| | Rated speed rpm : 250 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | CRT mm min. : > 6.30 |
| Rated speed rpm : 1100 Aneroid pressure | |
| hPa : 1200 + | CONTINUOUS-ACTION CONTROL |
| Del. quantity cm3/1000 strokes : 166.0 | Rated speed rpm : 400 |
| Tolerance cm3/1000 strokes : + 1.0 | |
| Check tolerance + 4.0 + | TORQUE CONTROL |
| Spreed | Rated speed rpm : 1100 |
| Tolerance cm3/1000 strokes : 5.0 | rack travel mm : 12.05 Tolerance mm : +- 0.05 |
| Check tolerance + cm3/1000s. : 9.0 | Rated speed rpm : 700 |
| | rack travel mm : 11.30 Tolerance mm : + 0.10 |
| RATED SPEED | |
| control lever | Rated speed rpm : 900 rack travel mm : 11.55 Tolerance mm : +- 0.15 |
| position degree : 57.0 + tolerance degree : + 4.0 + | Rated speed rpm : 500 |
| control lever | rack travel mm : 10.55 Tolerance mm : + 0.15 |
| position degree : 115.0 tolerance degree : +- 4.0 | TO CONTINUE TO THE TOTAL OF THE |
| | |

| ANEROID/ALTITUDE COMPENSATOR TEST | | |
|---|--|---|
| SETTING | | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1100 : 1200 : 12.05 : +- 0.05 | |
| MEASUREMENT | | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 1100 : 7.60 : + 0.10 | |
| Rated speed rpm | : 1100 | |
| Pressure hPa rack travel mm Tolerance mm | : 320 : 8.30 : ← 0.20 | |
| Pressure hPa rack trävel mm Tolerance mm | : 700 : 11.15 : ← 0.05 | |
| START CUT-OUT | | |
| Rated speed rpm Check speed 1/min Rated speed rpm Check speed 1/min | : > 100 : > 80 : < 270 : < 290 | • |
| FUEL DELIVERY CHA | RACTERISTICS | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance | : +- 3.0 : +- 6.0 : 8.0 | - |
| cm3/1000s. | : 12.0 | • |
| Aneroid pressure | | - |

Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 107.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.00 Rated speed rpm : 1145 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s.

: +- 19.0

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hPa

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W490/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402736830

Injection pump

Pump designation : PES6P110A120RS7263

EP type number : 0412716808

Governor

Governer design. : RQV350...1250PA964

: -11K

Governer no. : 0421815321

Cust. part No. : 3281780

Customer—spec. information Customer : CUMMINS

Motor : 68TAA

Power KW : 154.8

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 4.40
Tolerance mm : +- 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

Check

tolerance °NW : \leftarrow 0.50

BEGINNING OF DELIVERY DIFFERENCE

S.o.d. blocking

Barrel no. : 1
Tolerance : +- 0.10
Check

tolerance °NW : +- 0.23

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.85

Tolerance mm : + 0.05

| Del. quantity cm3/1000 strokes | : 152.0 | + |
|--|---------------------|---|
| Tolerance cm3/1000 strokes | : +- 1.0 | control lever position degree : - 1 Rated speed rpm : 1440 |
| Check tolerance cm3/1000s. | : +- 4.0 | Rack travel in mm : 9.00 Tolerance mm : +- 3.00 |
| Spreed Tolerance cm3/1000 strokes | : 5.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Check tolerance cm3/1000s. | : 9.0 | Rated speed rpm : 1100 Aneroid pressure hPa : 1200 |
| (B) SETTING OF IN WITH GOVERNOR | NJECTION PUMP | Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 |
| GUIDE SLEEVE TRAN | /EL | + Spreed |
| Rated speed rpm quide sleeve | : 350 | Tolerance cm3/1000 strokes : 5.0 Check tolerance |
| guide sleeve travel mm Tolerance mm | : 1.94 : +- 0.25 | cm3/1000s. : 9.0 |
| Rated speed rpm guide sleeve travel mm | : 1316 | RATED SPEED |
| Tolerance mm | : + 0.25 | control lever position degree : 63.0 |
| Rated speed rpm guide sleeve | | tolerance degree : +- 4.0 |
| travel mm Tolerance mm | | control leverposition degree : 121.0tolerance degree : + 4.0 |
| Rated speed rpm guide sleeve travel mm | : 353 : 1.77 | rack travel mm : 13.50 Rated speed rpm : 1310 |
| Tolerance mm | : +- 0.25 | Tolerance 1/min : +- 5 |
| Rated speed rpm guide sleeve | : 403 : 2.42 | rack travel mm : 4.00 Rated speed rpm : 1450 |
| travel mm Tolerance mm | : +- 0.25 | Tolerance 1/min : +- 15 rack travel mm : 0.50 |
| Rated speed rpm guide sleeve | | Tolerance mm : +- 0.50 Rated speed rpm : 1600 |
| travel mm Tolerance mm | : 2.82 : ← 0.25 | LOW IDLE |
| Rated speed rpm guide sleeve | | + |
| travel mm Tolerance mm | : 11.50 : ← 0.50 | control lever position degree : 72.0 tolerance degree : +- 4.0 |
| GUIDE SLEEVE POSI | TION | ‡ |

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| control lever position degree : 17 tolerance degree : +- 2 Testing: | 7.0 | rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm | : 13.15 |
|--|----------------------------|---|----------------------|
| Rated speed rpm : 350 rack travel mm : 5. Tolerance mm : + 0. |) .00 .10 | START CUT-OUT | . > 400 |
| Rated speed rpm : 250 | 7 | Rated speed rpm Check | |
| CRT mm min. : > 6. | 50 | speed 1/min Rated speed rpm Check | |
| CONTINUOUS-ACTION CONTROL | - | speed 1/min | : < 290 |
| Rated speed rpm : 375 | ; | FUEL DELIVERY CHAR | RACTERISTICS |
| TORQUE CONTROL | <u> </u> | Aneroid pressure hPa Rated speed rpm | : 1200 · 750 |
| Rated speed rpm : 1100 rack travel mm : 13. Tolerance mm : + 0. | 85 05 | Del. quantity cm3/1000 strokes Tolerance | : 154.0 |
| Rated speed rpm : 750 rack travel mm : 12. Tolerance mm : + 0. | 85 05 40 10 50 | cm3/1000 strokes Check tolerance cm3/1000s. Spreed | : +- 3.0 : +- 6.0 |
| Rated speed rpm : 1250 rack travel mm : 14. Tolerance mm : + 0. | 50 10 | Tolerance cm3/1000 strokes Check tolerance cm3/1000S. | |
| Rated speed rpm : 400 rack travel mm : 11. Tolerance mm : + 0. | 1 | Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes | : – : 500 |
| ANEROID/ALTITUDE COMPENSATOR TEST | + | Tolerance cm3/1000 strokes Check tolerance | : +- 1.0 |
| SETTING | ‡ | cm3/1000s. | : +- 4.0 |
| Rated speed rpm : 1250 Pressure hPa : 1200 rack travel mm : 14. Tolerance mm : +- 0. | 50 ‡ | BREAKAWAY Rack travel in mm Rated speed rpm | : 13.50 : 1310 |
| MEASUREMENT | ‡ | Tolerance 1/min | |
| Pressure hPa : - Rated speed rpm : 1250 Tolerance mm : + 0. | | STARTING FUEL DELI | VERY |
| Rated speed rpm : 1250 | ‡ | Rated speed rpm | : 100 : 12.50 |
| Pressure hPa : 570 | Į | rack travel mm Tolerance mm | : +- 0.50 |
| 100 | | | |

Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 12.12.94 Edition Test oil : ISO 4113 Combination No. : 0402736831 Injection pump Pump designation : PES6P120A120RS7261 EP type number : 0412726876 Governor Governer design. : RQV350...1100PA924 : -8K : 0421815318 Governer no. Cust. part No. : 3281841 Customer-spec. information Customer : CUMMINS Motor : 6CTAA Power KW : 176.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413047 Inlet press. bar : 1.5 Test nozzle holde : 1688901101 assembly Opening pressure 208.5 bar Tolerance bar Test lines : 1680750008

```
x inside diameter :
                        2.0
x Length mm :
                     600
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar
Prestroke mm
                 : +- 0.05
Tolerance mm
test only
                 : +- 0.10
Rack travel in mm: 10.50
Tolerance mm
                 : +- 1.50
Firing order
                 : 1-5-3-6-2-
                 : 4
                 : 0-60-120-180-240
Phasing
                 : -300
Tolerance
                 : +- 0.30
Check
tolerance °NW
                 : +- 0.50
BEGINNING OF DELIVERY DIFFERENCE
S.o.d. blocking
Barrel no.
                 : + 0.10
Tolerance
Check
tolerance °NW
                 : ← 0.23
BASIC SETTING
                     1100
Rated speed rpm
Rack travel in mm :
                     10.85
Tolerance mm
                : +- 0.05
Del. quantity
cm3/1000 strokes :
                     145.0
```

Outside diameter :

6.0

| Tolerance + 1.0 | rack travel mm : 4.00 Rated speed rpm : 1255 Tolerance 1/min : +- 15 |
|--|---|
| Check tolerance cm3/1000s. : + 4.0 | rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350 |
| Spreed Tolerance cm3/1000 strokes : 5.0 | LOW IDLE |
| Check tolerance cm3/1000s. : 9.0 | control lever position degree : 68.0 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | tolerance degree : +- 4.0 Testing: |
| GUIDE SLEEVE POSITION | Rated speed rpm : 350 rack travel mm : 5.10 Tolerance mm : + 0.10 |
| | Rated speed rpm : 250 |
| control lever position degree : -1 Rated speed rpm : 1400 | CRT mm min. : > 6.60 |
| Rack travel in mm: 9.00 Tolerance mm: + 3.00 | CONTINUOUS-ACTION CONTROL |
| TOCCT CATISE THAT | Rated speed rpm : 400 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | TORQUE CONTROL |
| Rated speed rpm : 1100 Aneroid pressure hPa : 900 Del. quantity | Rated speed rpm : 1100 rack travel mm : 10.85 Tolerance mm : + 0.05 |
| cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 | Rated speed rpm : 700 rack travel mm : 10.00 Tolerance mm : +- 0.10 |
| Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance | Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : +- 0.15 |
| cm3/1000s. : 9.0 | Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 |
| RATED SPEED | |
| control lever position degree : 113.0 tolerance degree : + 4.0 | ANEROID/ALTITUDE COMPENSATOR TEST |
| rack travel mm : 9.80 Rated speed rpm : 1145 Tolerance 1/min : + 5 | SETTING Rated speed rpm : 1100 Pressure hPa : 900 rack travel mm : 10.85 |

| Tolerance mm | : - 0.05 |
|---|--------------------------------|
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - 1100 : 7.70 : + 0.10 |
| Rated speed rpm | : 1100 |
| Pressure hPa rack travel জো Tolerance mm | : 320 : 8.50 : +- 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 560 : 10.25 : +- 0.05 |
| START CUT-OUT | |
| Rated speed rpm | : > 100 |
| Check speed 1/min Rated speed rpm | : > 80 : < 270 |
| Check speed 1/min | : < 290 |
| FUEL DELIVERY CHA | RACTERISTICS |
| Aneroid pressure hPa Rated speed rpm Del. quantity | : 900 : 700 |
| cm3/1000 strokes Tolerance | : 150.0 |
| cm3/1000 strokes Check tolerance | : + 3.0 |
| cm3/1000s. Spreed | : +- 6.0 |
| Tolerance cm3/1000 strokes | : 8.0 |
| Check tolerance cm3/1000s. | : 12.0 |
| Aneroid pressure hPa Rated speed rpm | : - : 500 |
| Del. quantity cm3/1000 strokes | : 107.0 |
| Tolerance | |
| cm3/1000 strokes Check tolerance | : +- 2.0 |

Rack travel in mm : 9.80
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 265.0
Tolerance
cm3/1000 strokes : + 15.0

Check tolerance cm3/1000s. : +- 19.0

, +-- 19.0

| | 1 | |
|--|--------------------------------------|--|
| Refer to Service adjustment instru See microcard(s) | | x inside diameter : 2.0 x length mm : 600 |
| Edition Test oil | : 12.12.94 : ISO 4113 | REMARKS |
| Combination No. | : 0402736858 | |
| Injection pump Pump designation EP type number Governor | : PES6P110A120RS7214 : 0412716805 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| | : RQV3501200PA964 | |
| overner no. | : -28K : 0421815428 | BEGINNING OF DELIVERY |
| ust. part No. | . 3282464 | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| | | Prestroke mm : 4.40 Tolerance mm : +- 0.05 |
| ustomer-spec. in ustomer | formation + | test only : +- 0.10 |
| stomer tor | : 6CTA-A | |
| ower KW | : 156.0 | Rack travel in mm : 10.50 Tolerance mm : +- 1.50 |
| ST BENCH REQUIRE | EMENTS | Firing order : 1-5-3-6-2- |
| est oil inlet emp. °C plerance °C | : | Phasing : 0-60-120-180-240 : -300 |
| fl | . 1/17/170/7 | Tolerance : +- 0.30 |
| erflow valve | . 141/41304/ | Check tolerance °NW : +- 0.50 |
| et press. bar | - | BEGINNING OF DELIVERY DIFFERENCE |
| erflow quantity n. l/h lerance l/h | : 120 : ← 10.0 | S.o.d. blocking Barrel no. : 1 Tolerance : + 0.10 |
| st nozzle holde sembly | : 1688901101 | Check tolerance °NW : +- 0.23 |
| | Ť | BASIC SETTING |
| pening pressure ar | : 208.5 | |

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Test lines : 1680750008

Outside diameter : 6.0

| | + | |
|--|-----------------------------|---|
| Rack travel in m Tolerance mm | m: 12.35 : + 0.05 | Rack travel in mm : 16.50 Tolerance mm : +- 1.30 |
| Del. quantity cm3/1000 strokes | : 148.5 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Tolerance cm3/1000 strokes | : +- 1.0 | Rated speed rpm : 1200 Aneroid pressure hPa : 1200 |
| Check tolerance cm3/1000s. | : + 4.0 | Del. quantity cm3/1000 strokes : 148.5 Tolerance |
| Spreed Tolerance cm3/1000 strokes | : 5.0 | cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed |
| Check tolerance cm3/1000s. | : 9.0 | Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 |
| (B) SETTING OF IN WITH GOVERNOR | NJECTION PUMP | RATED SPEED |
| GUIDE SLEEVE TRAN | VEL | |
| Rated speed rpm guide sleeve | + | control lever position degree : 119.0 tolerance degree : +- 4.0 |
| travel mm Tolerance mm | : 1.80 : + 0.20 | rack travel mm : 11.30 Rated speed rpm : 1250 |
| Rated speed rpm guide sleeve travel mm | : 1200 | Tolerance 1/min : +- 5 rack travel mm : 4.00 |
| Tolerance mm | : + 0.10 + | Rated speed rpm : 1380 Tolerance 1/min : +- 15 |
| Rated speed rpm guide sleeve travel mm Tolerance mm | : 450 : 3.30 : + 0.20 | rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500 |
| Rated speed rpm guide sleeve | 1 | LOW IDLE |
| travel mm Tolerance mm | : 6.10 : + 0.20 | |
| Rated speed rpm guide sleeve | T | control lever position degree : 65.0 tolerance degree : +- 4.0 |
| travel mm Tolerance mm | : 10.90 : + 0.20 | Testing: |
| GUIDE SLEEVE POSI | TION | Rated speed rpm : 350 rack travel mm : 5.50 Tolerance mm : +- 0.10 |
| control lever position degree | : -1 | Rated speed rpm : 275 |
| Rated speed rpm | : 1330 | CRT mm min. : > 7.20 |

| Rated speed rpm | : 423 |
|---|--|
| TORQUE CONTROL | |
| Rated speed rpm rack travel mm Tolerance mm | : 1200 : 12.35 : +- 0.05 |
| Rated speed rpm rack travel mm Tolerance mm | : 650 : 11.10 : ← 0.20 |
| Rated speed rpm rack travel mm Tolerance mm | : 550 : 11.00 : +- 0.20 |
| ANEROID/ALTITUDE COMPENSATOR TEST | |
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1200 : 1200 : 12.35 : +- 0.05 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 1200 : 7.90 : + 0.20 |
| Rated speed rpm | : 1200 |
| Pressure hPa rack travel mm Tolerance mm | : 575 : 11.40 : ← 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 225 : 8.95 : ← 0.05 |
| START CUT-OUT | |
| Rated speed rpm Check | : > 100 |
| speed 1/min Rated speed rpm Check | : > 80 : < 290 |
| speed 1/min | : < 300 |

CONTINUOUS-ACTION CONTROL

| FUEL DELIVERY CHA | RACTERISTICS |
|-------------------|--------------------|
| Aneroid pressure | |
| hPa | : 1200 |
| Rated speed rpm | : 650 |
| Del. quantity | |
| cm3/1000 strokes | : 154.0 |
| Tolerance | . (54.6 |
| | 7.0 |
| cm3/1000 strokes | : ← 3.0 |
| Check tolerance | |
| cm3/1000S. | : +- 6.0 |
| Spreed | |
| Tolerance | |
| cm3/1000 strokes | : 8.0 |
| Check tolerance | |
| cm3/1000s. | : 12.0 |
| CIIS/ 10003. | . 12.0 |
| Anonaid anosauma | |
| Aneroid pressure | |
| hPa | : - |
| Rated speed rpm | : 500 |
| Del. quantity | |
| cm3/1000 strokes | : 91.5 |
| Tolerance | |
| cm3/1000 strokes | : +- 2.0 |
| Check tolerance | . , 2.0 |
| cm3/1000S. | · +- 4.0 |
| CMS/ (UUUS. | : + 4.0 |
| | |
| DDEAVALIAN | |
| BREAKAWAY | |
| | |
| | |
| Rack travel in mm | : 11.30 |
| Rated speed rpm | : 1250 |
| Tolerance 1/min | : +- 5 |
| | - |
| | |
| | |

Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0

STARTING FUEL DELIVERY

| | | ₹ |
|---|--|--|
| BOSCH INJ. PUMP T | TEST SPECIFICATIONS | x inside diameter: 2.0 x length mm : 600 |
| Note remarks | | T x ceriger in . 000 |
| Refer to Service adjustment instru See microcard(s) | Info for test and ections. W400/ | REMARKS |
| Edition Test oil Combination No. | : ISO 4113 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Injection pump Pump designation EP type number | : PES6P120A120RS7261 : 0412726876 | BEGINNING OF DELIVERY |
| Governor Governer design. | : RQV3501100PA924 : -10K | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Governer no. | | Prestroke mm : 3.55 Tolerance mm : + 0.05 |
| Cust. part No. | : 3282465 | test only : +- 0.10 Rack travel in mm : 10.50 |
| | | † Tolerance mm : +- 1.50 |
| Customer—spec. in Customer Motor Power KW | formation : CUMMINS : 6CTAA : 176.0 | Firing order : 1-5-3-6-2- |
| TEST BENCH REQUIR | EMENTS | Phasing : 0-60-120-180-240 : -300 |
| Test oil inlet temp. °C Tolerance °C | : 40 : +- 2.0 | Tolerance : + 0.30 Check tolerance °NW : + 0.50 |
| Overflow valve | : 1417413047 | BEGINNING OF DELIVERY DIFFERENCE S.o.d. blocking |
| Inlet press. bar | : 1.5 | Barrel no. : 1 Tolerance : + 0.10 Check tolerance "NW : + 0.23 |
| Test nozzle holde assembly | : 1688901101 | BASIC SETTING |
| Opening pressure bar Tolerance bar | : 208.5 : + 1.5 | Rated speed rpm : 1100 |
| Test lines | : 1680750008 | Rack travel in mm : 10.85 Tolerance mm : + 0.05 |
| Outside diameter | : 6.0 | Del. quantity cm3/1000 strokes : 145.0 |

| Track travel mm | | |
|--|---|---|
| Check tolerance cm3/1000S. : → 4.0 Tolerance mm : → 0.50 | | + rack travel mm : 4.00 + Rated speed rpm : 1255 + Tolerance 1/min : + 15 |
| Spreed | Check tolerance | rack travel mm : 0.50 Tolerance mm : +- 0.50 |
| Check tolerance cm3/1000S. : 9.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR Rated Speed rpm : 350 rack travel mm : 5.10 Tolerance mm : + 0.10 Rated speed rpm : 1400 Rack travel in mm : 9.00 Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure 900 Del. quantity 700 rack travel mm : 10.85 Tolerance mm : + 0.05 rack travel mm : 10.85 Tolerance mm : + 0.00 Tolerance mm : 10.85 Tolerance mm : + 0.05 Tolerance mm : + 0.10 Rated speed rpm : 10.00 Tolerance mm : + 0.10 Tolerance mm : + 0.10 Rated speed rpm : 900 rack travel mm : 10.00 Tolerance mm : + 0.10 Tolerance mm : + 0.15 Tolerance mm : + 0. | Tolerance | ‡ |
| cm3/1000S. : 9.0 control lever position degree : 68.0 tolerance degree : + 4.0 MITH GOVERNOR Testing: Rated speed rpm : 350 rack travel rmm : 5.10 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 350 rack travel rmm : 5.10 Tolerance mm : + 0.10 control lever position degree : - 1 Rated speed rpm : 1400 CRT mm min. : > 6.60 Rack travel in mm : 9.00 Tolerance mm : + 3.00 CONTINUOUS-ACTION CONTROL Rated speed rpm : 1100 Aneroid pressure PPa : 900 Del. quantity cm3/1000 strokes : 145.0 Tolerance mm : + 0.05 Tolerance mm : + 0.05 Tolerance mm : + 0.05 Tolerance mm : + 0.10 Check tolerance cm3/1000 strokes : 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.15 Tolerance mm : + | | |
| ## STH GOVERNOR ## STATED SPEED WITH GOVERNOR ## STATED SPEED GUIDE SLEEVE POSITION ## STATED SPEED GUIDE SLEEVE POSITION ## STATED SPEED GUIDE SLEEVE POSITION ## STATED SPEED GUIDE SLEEVE POSITION ## STATED SPEED GUIDE SLEEVE POSITION ## STATED SPEED GUIDE SLEEVE POSITION ## STATED SPEED Rated speed rpm : 350 | | position degree : 68.0 |
| GUIDE SLEEVE POSITION GUIDE SLEEVE POSITION Tolerance mm : + 0.10 Rated speed rpm : 250 CRT mm min. : > 6.60 Rated speed rpm : 400 Rack travel in mm : 9.00 Tolerance mm : + 3.00 Rated speed rpm : 400 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure hPa : 900 Pel. quantity cm3/1000 strokes : 145.0 Tolerance mm : + 0.05 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 10.00 Rated speed rpm : 10.85 Tolerance mm : + 0.10 Rated speed rpm : 700 rack travel mm : 10.00 Tolerance mm : + 0.10 Rated speed rpm : 700 rack travel mm : 10.00 Tolerance mm : + 0.10 Rated speed rpm : 900 rack travel mm : 10.00 Tolerance mm : + 0.15 Rated speed rpm : 900 Rated speed rpm : 900 Tolerance mm : + 0.15 Rated speed rpm : 900 Rated speed rpm : 900 Tolerance mm : + 0.15 Rated speed rpm : 900 Rated speed rpm : 900 Tolerance mm : + 0.15 Rated speed rpm : 900 Rated speed rpm : 900 Tolerance mm : + 0.15 Rated speed rpm : 900 Rated speed rpm : 900 Rated speed rpm : 900 Tolerance mm : + 0.15 Rated speed rpm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 400 Rated speed | | Testing: |
| control lever position degree : - 1 | GUIDE SLEEVE POSITION | Rated speed rpm : 350 rack travel mm : 5.10 Tolerance mm : + 0.10 |
| Dosition degree - 1 | nontral lavas | Rated speed rpm : 250 |
| Rated speed rpm : 400 Rated speed rpm : 400 | position degree : - 1 | CRT mm min. :> 6.60 |
| Rated speed rpm : 400 | | CONTINUOUS-ACTION CONTROL |
| Rated speed rpm : 1100 Aneroid pressure hPa : 900 | Toter dance him . To 5.00 | Rated speed rpm : 400 |
| Rated speed rpm : 1100 Aneroid pressure hPa : 900 | FULL LOAD DELIVERY AT FULL LOAD STOP | TORQUE CONTROL |
| hPa : 900 Del. quantity cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : 9.0 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.10 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST position degree : 113.0 tolerance degree : + 4.0 rack travel rm : 9.80 Rated speed rpm : 1100 | Rated speed rpm : 1100 Ameroid pressure | + |
| Tolerance | hPa : 900 | rack travel mm : 10.85 |
| cm3/1000 strokes : + 1.0 rack travel mm : 10.00 Check tolerance cm3/1000s. : + 4.0 Rated speed rpm : 900 Folerance cm3/1000 strokes : 5.0 rack travel mm : 10.35 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 400 RATED SPEED Rated speed rpm : 9.15 Tolerance mm : 9.15 Tolerance mm : 9.15 Tolerance mm : 9.15 Tolerance mm : 9.15 Tolerance mm : 9.15 Tolerance mm : 9.15 RATED SPEED SETTING rack travel mm : 9.80 SETTING Rated speed rpm : 1145 Rated speed rpm : 1100 | cm3/1000 strokes : 145.0 | |
| Spreed Tolerance cm3/1000 strokes: 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : 9.15 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST rack travel mm : 9.80 Rated speed rpm : 1145 Rated speed rpm : 1100 | cm3/1000 strokes : +- 1.0 Check tolerance | + rack travel mm : 10.00 |
| Cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST rack travel mm : 9.80 Rated speed rpm : 1145 Rated speed rpm : 1100 | Spreed | Rated speed rpm : 900 |
| RATED SPEED RATED SPEED RATED SPEED RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST COMPENSATOR TEST Rated speed rpm : 400 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1100 | cm3/1000 strokes : 5.0 - | Tolerance mm : +- 0.15 |
| RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST COMPENSATOR TEST COMPENSATOR TEST Final Properties of the compensation of th | | Rated speed rpm : 400 |
| control lever position degree : 113.0 tolerance degree : +- 4.0 rack travel mm : 9.80 Rated speed rpm : 1145 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1100 | PATEN SPEEN | Tolerance mm : +- 0.15 |
| control lever position degree : 113.0 tolerance degree : +- 4.0 rack travel mm : 9.80 Rated speed rpm : 1145 COMPENSATOR TEST SETTING Rated speed rpm : 1100 | - | |
| rack travel mm : 9.80 + Rated speed rpm : 1145 + Rated speed rpm : 1100 | position degree : 113.0 | |
| Rated speed rpm : 1145 | _ | SETTING |
| · | Rated speed rpm : 1145 - | Rated speed rpm : 1100 Pressure hPa : 900 rack travel mm : 10.85 |

| MEASUREMENT | |
|---|------------------------------|
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | |
| Rated speed rpm | : 1100 |
| Pressure hPa rack travel mm Tolerance mm | : 320 : 8.50 : ← 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 560 : 10.25 : + 0.05 |
| START CUT-OUT | |
| Rated speed rpm Check | : > 100 |
| speed 1/min Rated speed rpm | : > 80 : < 270 |
| Check speed 1/min | : < 290 |
| Aneroid pressure hPa Rated speed rpm | : 900 |
| Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : 150.0 |

Rack travel in mm : 9.80 Rated speed rpm : 1145 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 265.0

Tolerance cm3/1000 strokes : + 15.0 Check tolerance

: +- 19.0 cm3/1000s.

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 12.12.94 Edition : ISO 4113 Test oil Combination No. : 0402736860 Injection pump Pump designation : PES6P110A120RS7214 EP type number : 0402716805 Governor Governer design. : RQV350...1200PA964 : -29K : 0421815430 Governer no. Cust. part No. : 3282466 Customer-spec. information Customer : CDC Motor : 6CTA-A : 187.0 Power KW TEST BENCH REQUIREMENTS Test oil inlet temp. °C 40 Tolerance °C 2.0 : 1417413047 Overflow valve Inlet press. bar : 1.5 Overflow quantity 120 min. L/h Tolerance l/h 5.0 Test nozzle holde : 1688901101 assembly Opening pressure 208.5 bar

Test Lines : 1680750008 Outside diameter : 6.0 x inside diameter : 2.0 x Length mm : REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : Tolerance bar : +-Prestroke mm 4.40 Tolerance mm : +- 0.05 test only : + 0.10Rack travel in mm: 10.50 Tolerance mm : +- 1.50 Firing order : 1-5-3-6-2-: 0-60-120-180-240 Phasing : -300 Tolerance : +- 0.30 Check tolerance "NW : + - 0.50BEGINNING OF DELIVERY DIFFERENCE S.o.d. blocking Barrel no. : + - 0.10Tolerance Check tolerance °NW : +- 0.23BASIC SETTING

1200

Rated speed rpm

Tolerance bar

| Rack travel in mm: 14.55 Tolerance mm: +- 0.05 | tolerance degree : +- 4.0 control lever |
|--|--|
| vel. quantity cm3/1000 strokes : 184.0 | position degree : 119.0 tolerance degree : +- 4.0 |
| Tolerance cm3/1000 strokes : + 1.0 | rack travel mm : 13.50 Rated speed rpm : 1250 Tolerance 1/min : +- 5 |
| Check tolerance cm3/1000s. : + 4.0 | rack travel mm : 4.00 Rated speed rpm : 1410 Tolerance 1/min : +- 15 |
| Spreed Tolerance cm3/1000 strokes : 5.0 | rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1500 |
| Check tolerance cm3/1000s. : 9.0 | LOW IDLE |
| <u>‡</u> | |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 65.0 tolerance degree : +- 4.0 |
| GUIDE SLEEVE POSITION | control lever position degree : 15.0 tolerance degree : +- 4.0 |
| corcrol lever position degree : -1 Rated speed rpm : 1330 | Testing: |
| Rack travel in mm : 16.50 Tolerance mm : + 1.30 | Rated speed rpm : 350 rack travel mm : 5.40 Tolerance mm : + 0.10 |
| | Rated speed rpm : 275 |
| FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 | CRT mm min. : > 7.20 |
| Aneroid pressure + | |
| hPa : 1200 + Del. quantity + | CONTINUOUS-ACTION CONTROL |
| cm3/1000 strokes : 184.0 + | Rated speed rpm : 425 |
| cm3/1000 strokes : + 1.0 + Check tolerance | TORQUE CONTROL |
| cm3/1000s. : +- 4.0 +- Spreed | Rated speed rpm : 1200 |
| Tolerance + cm3/1000 strokes : 5.0 + | Rated speed rpm : 1200 rack travel mm : 14.55 Tolerance mm : +- 0.05 |
| Check tolerance cm3/1000s. : 9.0 | Rated speed rpm : 650 rack travel mm : 11.50 Tolerance mm : + 0.20 |
| RATED SPEED | TO CET GIRCE UNIII . THE U.ZU |
| control lever position degree : 66.0 | |

| ANEROID/ALTITUDE COMPENSATOR TEST | |
|---|---|
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1200 : 1200 : 14.55 : + 0.05 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 1200 : 7.70 : + 0.20 |
| Rated speed rpm | : 1200 |
| Pressure hPa rack travel mm Tolerance mm | : 860 : 13.40 : ← 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 320 : 9.45 : +- 0.05 |
| START CUT-OUT | |
| Rated speed rpm Check | : > 100 |
| speed 1/min Rated speed rpm Check | : > 80 : < 290 |
| speed 1/min | : < 300 |
| FUEL DELIVERY CHA | RACTERISTICS |
| Aneroid pressure hPa Rated speed rpm | : 1200 : 650 |
| Del. quantity cm3/1000 strokes | : 167.5 |
| Tolerance cm3/1000 strokes | : +- 3.0 |
| Check tolerance | : +- 6.0 |
| cm3/1000S. Spreed | |
| Spreed Tolerance cm3/1000 strokes | : 8.0 |
| Spreed Tolerance | : 8.0 : 12.0 |

Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 91.5 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0

BREAKAWAY

Rack travel in mm : 13.50
Rated speed rpm : 1250
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 155.0

Tolerance cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s. : +- 25.0

| Note remarks | EST SPECIFICATIONS | x inside diameter: 2.0 x length mm : 600 | |
|---|---------------------------------------|---|-------------|
| NOTE TENERKS | | I | |
| Refer to Service adjustment instru See microcard(s) | Info for test and ctions. W400/ | REMARKS | |
| Edition | • 12.12.94 | Ī | |
| Edition Test oil | | (A) INJECTION PUMP SETTING VI | ALUES |
| Combination No. | : 0402736861 | per values | |
| Injection pump Pump designation | : PES6P120A120RS7261 | BEGINNING OF DELIVERY | |
| EP type number | : 0412726876 | 74.0 | |
| Governor | | Test pressure bar : 31.0 Tolerance bar : + 1.0 | |
| Governer design. | : RQV3501100PA924 : -11K | Totalite bai | |
| Governer no. | : 0421815431 | Prestroke mm : 3.55 | |
| | | Prestroke mm : 3.55 Tolerance mm : + 0.05 | |
| Cust. part No. | : 3282468 | test only : \leftarrow 0.10 | |
| | | Rack travel in mm : 10.50 Tolerance mm : +- 1.50 | |
| Customer—spec. in | formation | Total airce iiiii . 4 1.30 | |
| Customer Motor Power KW | : CUMMINS : GCTAA | Firing order : 1-5-3 : 4 | 5- 6- Z |
| TEST BENCH REQUIR | EMENTS | Phasing : 0-60-120 | J-180-240 |
| | | + : -300 | |
| Test oil inlet | | Tolerance : + 0.30 | |
| temp. "C Tolerance "C | : 40 : +- 2.0 | tolerance °NW : +- 0.50 | |
| | | BEGINNING OF DELIVERY DIFFERE | NCE |
| Overflow valve | : 1417413047 | + | |
| | | S.o.d. blocking Barrel no. : 1 | |
| Inlet press. bar | : 1.5 | + Tolerance : +- 0.10 | |
| • | | Check | |
| Test nozzle holde | | tolerance °NW : + 0.23 | |
| assembly | : 1688901101 | | |
| Opening process | | BASIC SETTING | |
| Opening pressure bar | : 208.5 | Rated speed rpm : 1100 | |
| Tolerance bar | : + 1.5 | | |
| | | Rack travel in mm : 12.05 | |
| Test lines | : 1680750008 | Tolerance mm : +- 0.05 | |
| Outside diameter | : 6.0 | Del. quantity | |
| | | cm3/1000 strokes : 166.0 | |

| | rack travel mm : 11.00 |
|---|--|
| Tolerance cm3/1000 strokes : + 1.0 | Rated speed rpm : 1145 Tolerance 1/min : +- 5 |
| Check tolerance cm3/1000s. : +- 4.0 | rack travel mm : 4.00 Rated speed rpm : 1275 Tolerance 1/min : +- 15 |
| Spreed Tolerance cm3/1000 strokes : 5.0 | rack travel mm : 0.50 Tolerance mm : +- 0.50 |
| Check tolerance cm3/1000s. : 9.0 | Rated speed rpm : 1350 |
| † | LOW IDLE |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 70.0 tolerance degree : +- 4.0 |
| GUIDE SLEEVE POSITION | control lever position degree : 17.0 tolerance degree : +- 4.0 |
| control lever position degree : -1 Rated speed rpm : 1400 | Testing: |
| Rack travel in mm : 9.00 Tolerance mm : + 3.00 | Rated speed rpm : 350 rack travel mm : 4.90 Tolerance mm : +- 0.10 |
| | Rated speed rpm : 250 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | CRT mm min. :> 6.30 |
| Rated speed rpm : 1100 Aneroid pressure | |
| hPa : 1200 + Del. quantity + | CONTINUOUS-ACTION CONTROL |
| cm3/1000 strokes : 166.0 + | Rated speed rpm : 400 |
| cm3/1000 strokes : + 1.0 + Check tolerance + | TORQUE CONTROL |
| cm3/1000s. : + 4.0 + Spreed + Tolerance | Rated speed rpm : 1100 rack travel mm : 12.05 |
| cm3/1000 strokes : 5.0 | rack travel mm : 12.05 Tolerance mm : +- 0.05 |
| Check tolerance cm3/1000s. : 9.0 | Rated speed rpm : 700 |
| | rack travel mm : 11.30 Tolerance mm : +- 0.10 |
| RATED SPEED | |
| control lever | Rated speed rpm : 900 rack travel mm : 11.55 Tolerance mm : + 0.15 |
| | |
| position degree : 57.0 tolerance degree : + 4.0 | Rated speed rpm : 500 rack travel mm : 10.55 Tolerance mm : +- 0.15 |

| ANEROID/ALTITUDE COMPENSATOR TEST | |
|---|---|
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1100 : 1200 : 12.05 : ← 0.05 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 1100 : 7.60 : +- 0.10 |
| Rated speed rpm | : 1100 |
| Pressure hPa rack travel mm Tolerance mm | : 320 : 8.30 : + 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 700 : 11.15 : ← 0.05 |
| START CUT-OUT | |
| Rated speed rpm Check | : > 100 |
| speed 1/min Rated speed rpm Check | : > 80 : < 270 |
| speed 1/min | : < 290 |
| FUEL DELIVERY CHA | RACTERISTICS |
| Aneroid pressure hPa Rated speed rpm | : 1200 : 700 |
| Del. quantity cm3/1000 strokes | : 180.0 |
| Tolerance cm3/1000 strokes | : + 3.0 |
| Check tolerance cm3/1000S. Spreed | : ← 6.0 |
| Tolerance cm3/1000 strokes | : 8.0 |
| Check tolerance cm3/1000s. | : 12.0 |
| Aneroid pressure hPa | : - |
| | |

Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 107.0
Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.00
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 265.0 Tolerance

cm3/1000 strokes : \leftarrow 15.0 Check tolerance

cm3/1000s. : +- 19.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 12.12.94 Test oil : ISO 4113 Combination No. : 0402736862 Injection pump Pump designation : PES6P110A12ORS7214 EP type number : 0412716805 Governor Governer design. : RQV350...1200PA964 : -30K Governer no. : 0421815432 Cust. part No. : 3282469 Customer-spec. information Customer : CUMMINS Motor : 6CTA-A Power KW : 213.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413047 Inlet press. bar : 1.5 Overflow quantity min. L/h Tolerance 1/h : +- 5.0 Test nozzle holde : 1688901101 assembly Opening pressure

208.5

Test lines : 1680750008 Outside diameter : 6.0 x inside diameter : 2.0 x length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : Tolerance bar : \leftarrow 1.0 Prestroke mm : +- 0.05Tolerance mm test only : + 0.10Rack travel in mm : 10.50 Tolerance mm : +- 1.50 : 1-5-3-6-2-Firing order Phasing : 0-60-120-180-240 : -300 Tolerance : +- 0.30Check tolerance °NW : + 0.50BEGINNING OF DELIVERY DIFFERENCE S.o.d. blocking Barrel no. Tolerance : ← 0.10 Check tolerance "NW : +- 0.23BASIC SETTING

Rated speed rpm

1100

bar

Tolerance bar

| Tolerance mm : | | | | |
|--|--|-------------|--|------------------------------|
| bel. quantity tolerance cm3/1000 strokes : 192.5 Tolerance cm3/1000 strokes : + 1.0 rack travel mm : 13.20 Check tolerance cm3/1000s : + 4.0 rack travel mm : 4.00 Check tolerance cm3/1000s : + 4.0 Rated speed rpm : 1405 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Spreed Tolerance cm3/1000s : 5.0 Tolerance 1/min : + 0.50 Check tolerance cm3/1000s : 9.0 Tolerance mm : + 0.50 Check tolerance cm3/1000s : 9.0 LOW IDLE (B) SETTING OF INJECTION PUMP WITH GOVERNOR control lever position degree : - 4.0 GUIDE SLEEVE POSITION control lever position degree : - 4.0 control lever position degree : - 1 Tolerance degree : + 4.0 rack travel in mm : 16.50 Tolerance degree : + 4.0 Rated speed rpm : 1260 Rated speed rpm : 350 Rated speed rpm : 100 rack travel mm : 5.70 Tolerance mm : + 0.10 Rated speed rpm : 275 Rated speed rpm : 100 Rated speed rpm : 275 Rated speed rpm : 1200 CONTINUOUS-ACTION CONTROL Rated speed rpm : 423 ToRQUE CONTROL rack travel rmm : + 0.05 Rated speed rpm : 14.75 rom3/1000s trokes : 5.0 | | | control lever | |
| Tolerance cm3/1000 strokes : + 1.0 | Del. quantity cm3/1000 strokes : 19 | 2.5 | tolerance degree | : +- 4.0 |
| cm3/1000s. : + 4.0 Rated speed rpm : 1405 Spreed Tolerance 1/min : + 15 Tolerance cm3/1000 strokes : 5.0 Tolerance nm : + 0.50 Check tolerance cm3/1000s. 9.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR Control lever position degree : 67.0 tolerance degree : + 4.0 GUIDE SLEEVE POSITION control lever position degree : + 4.0 control lever position degree : - 1 Rated speed rpm : 1260 Rated speed rpm : 350 rack travel mm : 5.70 Tolerance mm : + 0.10 Rack travel in mm : 16.50 Tolerance mm : + 1.30 Rated speed rpm : 275 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 275 Rated speed rpm : 1000 Aneroid pressure hPa : 1200 bel. quantity cm3/1000 strokes : 192.5 Tolerance cm3/1000 strokes : + 1.0 CONTINUOUS-ACTION CONTROL Rated speed rpm : 423 Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s : : + 4.0 Rated speed rpm : 1100 rack travel mm : 14.75 Tolerance mm : + 0.05 RATED SPEED Rated speed rpm : 650 rack travel mm : 12.80 Tolerance mm : + 0.20 RATED SPEED Rated speed rpm : 1200 rack travel mm : 12.00 rack travel mm : 14.30 Tolerance mm : + 0.10 | | 1.0 | Rated speed rpm | : 1250 |
| Spreed | Check tolerance cm3/1000s. : +- | 4.0 | rack travel mm Rated speed rpm Tolerance 1/min | : 1405 |
| Cm3/1000S. : 9.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR control lever position degree : 67.0 tolerance degree : + 4.0 GUIDE SLEEVE POSITION control lever position degree : + 4.0 control lever position degree : -1 Rated speed rpm : 1260 resting: Rack travel in mm : 16.50 Tolerance mm : + 1.30 Rated speed rpm : 350 rack travel mm : 5.70 Tolerance mm : + 0.10 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 275 Rated speed rpm : 1100 Aneroid pressure PPa : 1200 Del. quantity cm3/1000 strokes : 192.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Rated speed rpm : 1100 rack travel mm : 14.75 Tolerance mm : + 0.05 Tolerance mm : + 0.05 RATED SPEED Rated speed rpm : 1200 rack travel mm : 12.80 Tolerance mm : + 0.20 RATED SPEED Rated speed rpm : 1200 rack travel mm : 14.30 Tolerance mm : + 0.10 | Tolerance cm3/1000 strokes : | 5.0 | rack travel mm Tolerance mm | : 0.50 : +- 0.50 |
| ## Control Lever position degree : 67.0 tolerance degree : +- 4.0 control Lever position degree : +- 4.0 control Lever position degree : -1 | Check tolerance cm3/1000s. : (| 9.0 | LOW IDLE | |
| position degree | | PUMP + | position degree | |
| Dosition degree 1 | | <u> </u> | position degree | |
| Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 192.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : 5.0 Tolerance cm3/1000 strokes : 5.0 Rated speed rpm : 275 CRT mm min. : > 7.20 CONTINUOUS-ACTION CONTROL Rated speed rpm : 423 TORQUE CONTROL Rated speed rpm : 1100 Rated speed rpm : 423 Tolerance rm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : 5.0 Rated speed rpm : 1100 rack travel mm : 14.75 Tolerance mm : + 0.05 Rated speed rpm : 650 Rated speed rpm : 650 rack travel mm : 12.80 Tolerance mm : + 0.20 Rated speed rpm : 1200 Rated speed rpm : 650 rack travel mm : 12.80 Tolerance mm : + 0.20 Rated speed rpm : 1200 Rated speed rpm : 1200 rack travel mm : 14.30 Tolerance mm : + 0.10 | position degree : - 1 | 0 ‡ | Testing: | |
| Rated speed rpm : 1100 | | | Rated speed rpm rack travel mm Tolerance mm | : 350 : 5.70 : +- 0.10 |
| Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 192.5 Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance | FILL LOAD DELTVERY AT FULL | I LOAD STOP | Rated speed rpm | : 275 |
| hPa : 1200 | Rated speed rpm : 1100 | + | CRT mm min. | : > 7.20 |
| Tolerance cm3/1000 strokes : 192.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 1100 rack travel mm : 14.75 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 12.80 Tolerance mm : + 0.20 Rated speed rpm : 1200 rack travel mm : 14.30 Tolerance mm : + 0.10 | hPa : 1200 | 7 | CONTINUOUS-ACTION | CONTROL |
| TORQUE CONTROL | cm3/1000 strokes : 192 Tolerance | + | Rated speed rpm | : 423 |
| Rated speed rpm : 1100 Tolerance rack travel mm : 14.75 Tolerance mm : + 0.05 | Check tolerance | + | TORQUE CONTROL | |
| Cm3/1000S. : 9.0 | Spreed Tolerance cm3/1000 strokes : 5 | ‡ | rack travel mm | : 14.75 |
| RATED SPEED + Rated speed rpm : 1200 + rack travel mm : 14.30 control lever + Tolerance mm : +- 0.10 | | 9.0 | Rated speed rpm rack travel mm Tolerance mm | : 650 : 12.80 : ← 0.20 |
| position degree : 66.0 + | control lever | 5.0 | Rated speed rpm rack travel mm | : 1200 : 14.30 |

| ANEROID/ALTITUDE COMPENSATOR TEST | | + Ra - De - cm - To - cm |
|---|---|-------------------------------|
| SETTING | | + cm |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1100 : 1200 : 14.75 : + 0.05 | BRI |
| MEASUREMENT | | ∔ Ra |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 1100 : 8.00 : + 0.20 | + To |
| Rated speed rpm | : 1100 | De. |
| Pressure hPa rack travel mm Tolerance mm | : 785 : 13.00 : +- 0.20 | - cm - To - cm - Che |
| Pressure hPa rack travel mm Tolerance mm | : 335 : 9.65 : ← 0.05 | T Cm. |
| START CUT-OUT | | ‡ |
| Rated speed rpm Check | | Ī |
| speed 1/min Rated speed rpm Check | : > 80 : < 290 | + |
| speed 1/min | : < 300 | 1 |
| FUEL DELIVERY CHA | RACTERISTICS | + |
| Aneroid pressure | | <u> </u> |
| hPa | : 1200 | + |
| Rated speed rpm Del. quantity | : 650 | † |
| cm3/1000 strokes | : 184.0 | Ţ |
| Tolerance cm3/1000 strokes | | + |
| Check tolerance cm3/1000S. Spreed | : +- 6.0 | + |
| Tolerance cm3/1000 strokes | : 8.0 | ‡ |
| Check tolerance cm3/1000s. | : 12.0 | + |
| Aneroid pressure | | ‡ |
| hPa | : - | + |
| | | |

d speed rpm : 500 quantity 1000 strokes : 92.0 ance 1000 strokes : +- 2.0 c tolerance 000s. : +- 4.0

CAWAY

travel in mm : 13.20 d speed rpm : 1250 rance 1/min : +- 5

TING FUEL DELIVERY

quantity 1000 strokes : 155.0 ance 000 strokes : +- 20.0

tolerance : +- 25.0 000s.

| | | 1 |
|---|---------------------------------------|--|
| BOSCH INJ. PUMP T | TEST SPECIFICATIONS | x inside diameter : 2.0 × length mm : 600 |
| Note remarks | | - Congential . Goo |
| Refer to Service adjustment instru See microcard(s) | Info for test and ctions. W400/ | REMARKS |
| Edition Test oil Combination No. | | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| * | . 0402130003 | per vacues |
| Injection pump Pump designation EP type number | : PES6P120A120RS7206 : 0412726835 | BEGINNING OF DELIVERY |
| Governor Governer design. | : RQV3501100PA924 : -12K | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| Governer no. | | Prestroke mm : 3.55 Tolerance mm : + 0.05 |
| Cust. part No. | : 3282473 | test only : +- 0.10 |
| | | Rack travel in mm : 10.50 Tolerance mm : + 1.50 |
| Customer—spec. in Customer Motor Power KW | : CUMMINS : 6CTAA | Firing order : 1-5-3-6-2- |
| TEST BENCH REQUIR | EMENTS | Phasing : 0-60-120-180-240 : -300 |
| Test oil inlet temp. °C Tolerance °C | : 40 : +- 2.0 | Tolerance : +- 0.30 - Check - tolerance °NW : +- 0.50 |
| Overflow valve | : 1417413047 | BEGINNING OF DELIVERY DIFFERENCE |
| Overflow quantity min. l/h Tolerance l/h | : 165 : +- 5.0 | S.o.d. blocking Barrel no. : 1 Tolerance : + 0.10 Check tolerance °NW : + 0.23 |
| Test nozzle holde assembly | | BASIC SETTING |
| Opening pressure bar | : 208.5 | Rated speed rpm : 1100 |
| Tolerance bar | : + 1.5 | Rack travel in mm : 12.15 Tolerance mm : +- 0.05 |
| Test lines | | Del. quantity |
| Outside diameter | : 6.0 | + cm3/1000 strokes : 159.0 |

| | | rack travel mm | |
|--|--------------|---|-----------------------------|
| Tolerance cm3/1000 strokes : +- | 1.0 | Rated speed rpm Tolerance 1/min | : 1145 : +- 5 |
| | <u> </u> | | |
| Check tolerance | , a + | rack travel mm | |
| cm3/1000s. : +- | 4.0 | Rated speed rpm Tolerance 1/min | |
| Spreed | <u> </u> | roterance min | : 4 15 |
| Tolerance | <u> </u> | rack travel mm | : 0.50 |
| cm3/1000 strokes : | 5.0 | Tolerance mm | : ← 0.50 |
| | <u> </u> | Rated speed rpm | |
| Check tolerance | + | · | |
| cm3/1000s. : | 9.0 | 1 6 7 7 7 7 | |
| | † | LOW IDLE | |
| (B) SETTING OF INJECTION |) DIMP | | |
| WITH GOVERNOR | I | control lever | |
| Wall Governon | <u>.</u> | position degree | : 75.0 |
| | <u> </u> | tolerance degree | |
| | | _ | |
| GUIDE SLEEVE POSITION | + | control lever | |
| | + | position degree | |
| and all layers | + | tolerance degree | : +- 4.0 |
| control lever position degree : - 1 | † | Tankina | |
| position degree : - 1 Rated speed rpm : 14 | 20 I | Testing: | |
| nates speed / piii . 14 | 1 | Rated speed rpm | : 350 |
| Rack travel in mm : | 9.00 | rack travel mm | 5.30 |
| Tolerance mm : +- | · - · | Tolerance mm | : +- 0.10 |
| | + | | |
| FIRE LOSS OF THESE AT FI | | Rated speed rpm | : 250 |
| FULL LOAD DELIVERY AT FU | LL LOAD STOP | CDTi- | : > 6.80 |
| Rated speed rpm : 11 | nn I | CRT mm min. | : > 0.00 |
| Aneroid pressure | I I | | |
| hPa : 12 | 00 1 | CONTINUOUS-ACTION | CONTROL |
| Del. quantity | + | | |
| | 59.0 | Rated speed rpm | : 450 |
| Tolerance | + | | |
| cm3/1000 strokes : +- | 1.0 | TARAUE CONTRAL | |
| Check tolerance cm3/1000s. : +- | 4.0 | TORQUE CONTROL | |
| Spreed | 4.0 I | Rated speed rpm | : 1100 |
| Tolerance | \perp | rack travel mm | : 12.15 |
| cm3/1000 strokes : | 5.0 | rack travel mm Tolerance mm | : +- 0.05 |
| Check tolerance | + | | |
| cm3/1000s. : | 9.0 | Rated speed rpm | : 600 |
| | + | rack travel mm Tolerance mm | : 11.20 |
| DATEN COEEN | + | Tolerance mm | : +- 0.70 |
| RATED SPEED | † | Dated cread one | . 900 |
| | Ī | Rated speed rpm | : 800 : 11.80 |
| control lever | I | rack travel mm Tolerance mm | : + 0.10 |
| position degree : | 57.0 | . 3 (0) (0) (0) | |
| tolerance degree : +- | | *************************************** | |
| _ | + | ANEROID/ALTITUDE | |
| control lever | + | COMPENSATOR TEST | |
| position degree : 1 | 15.0 + | | |
| tolerance degree : +- | 4.0 | | |
| | | SETTING | |

| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1100 : 1200 : 12.15 : + 0.05 |
|---|---|
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | |
| Rated speed rpm | |
| Pressure hPa rack travel mm Tolerance mm | : 300 : 8.90 : + 0.20 |
| Pressure hPa rack travel mm Tolerance mm | : 600 : 11.20 : + 0.10 |
| START CUT-OUT | |
| Rated speed rpm Check | : > 100 |
| speed 1/min Rated speed rpm | : > 80 : < 270 |
| | |
| Check speed 1/min | : < 290 |
| | |
| FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity | RACTERISTICS : 1200 : 600 |
| FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance | RACTERISTICS : 1200 : 600 : 177.0 |
| speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance | RACTERISTICS : 1200 : 600 : 177.0 : ← 3.0 |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Spreed Tolerance cm3/1000strokes Check tolerance | RACTERISTICS : 1200 : 600 : 177.0 : + 3.0 : + 6.0 : 8.0 |
| speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | RACTERISTICS : 1200 : 600 : 177.0 : + 3.0 : + 6.0 |
| FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm | RACTERISTICS : 1200 : 600 : 177.0 : + 3.0 : + 6.0 : 8.0 |
| FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes | RACTERISTICS : 1200 : 600 : 177.0 : + 3.0 : + 6.0 : 8.0 : 12.0 |
| FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity | RACTERISTICS : 1200 : 600 : 177.0 : +- 3.0 : +- 6.0 : 8.0 : 12.0 : 500 |

BREAKAWAY

Rack travel in mm : 11.10
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : \leftarrow 10.0

Check tolerance cm3/1000s. : **←** 14.0

| POSCH TNJ PIMP T | TEST SPECIFICATIONS ‡ | Outside diameter : 8.0 |
|--|--------------------------------------|--|
| Note remarks | 1 | x inside diameter : 3.0 |
| | | x length mm : 600 |
| Edition Test oil | + | REMARKS |
| Combination No. | : 0402746931 | |
| Injection pump Pump designation EP type number Governor | : PES6P120A320RS7236 : 0412726848 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| | : RQV2751000PA1001 | per values |
| Governer no. | | BEGINNING OF DELIVERY |
| Cust. part No. | : CCEP5128A 66-194 | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| Customer-spec. in Customer Motor Power KW | : RVI : MIDR 063540 N/3 | Prestroke mm : 4.55 Tolerance mm : + 0.05 test only : + 0.10 |
| TEST BENCH REQUIR | FMENTS I | Rack travel in mm : 19.50 Tolerance mm : +- 1.50 |
| | 1 | Firing order : 1-5-3-6-2- |
| Test oil inlet temp. °C Tolerance °C | : 40 : +- 2.0 | Phasing : 0-60-120-180-240 |
| Overflow valve | : 2417413071 | : -300 Tolerance : +- 0.30 |
| | ‡ | Check tolerance "NW : +- 0.75 |
| Inlet press. bar Tolerance bar | : 2.5 : + 0.1 | BEGINNING OF DELIVERY DIFFERENCE |
| Test nozzle holde assembly | : 1688901105 | Time to cyl. no. : 1 |
| Opening pressure bar Tolerance bar | : 208.5 : +- 1.5 | BASIC SETTING |
| Lube oil | : 1409918004 | Rated speed rpm : 600 |
| Test lines | : 1680750089 | Rack travel in mm : -7.25 |

| Tolerance mm : +- 0.30 | + |
|---|---|
| Del. quantity cm3/1000 strokes : 74.0 | GUIDE SLEEVE POSITION |
| Tolerance cm3/1000 strokes : +- 1.0 | - control lever - position degree : - 1 |
| Check tolerance cm3/1000s. : + 4.0 | Rated speed rpm : 1190 Rack travel in mm : 13.20 |
| Spreed | Tolerance mm : +- 1.30 |
| Tolerance cm3/1000 strokes : 4.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Check tolerance cm3/1000s. : 7.0 | Rated speed rpm : 600 Aneroid pressure hPa : 1000 |
| Rated speed rpm : 600 | Del. quantity cm3/1000 strokes : 290.0 |
| Rack travel in mm : 13.35 Tolerance mm : +- 0.05 | Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 |
| Del. quantity cm3/1000 strokes : 290.0 | Spreed Tolerance cm3/1000 strokes: 8.0 |
| Tolerance cm3/1000 strokes : +- 2.0 | Check tolerance cm3/1000s. : 12.0 |
| Check tolerance cm3/1000s. : +- 5.0 | RATED SPEED |
| Spreed Tolerance cm3/1000 strokes : 8.0 | control lever position degree : 301.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. : 12.0 | rack travel mm : -1.00 Rated speed rpm : 1070 |
| 2nd speed rpm : 300 | Tolerance 1/min : + 5 |
| Rack travel in mm : -8.20 Tolerance mm : +- 0.20 Del. quantity | rack travel mm : -9.30 Rated speed rpm : 1205 Tolerance 1/min : +- 15 |
| cm3/1000 strokes : 31.0 Tolerance | + rack travel mm : -12.85 |
| cm3/1000 strokes : +- 2.5 Check tolerance cm3/1000s. : +- 5.0 | Tolerance mm : +- 0.55 Rated speed rpm : 1350 |
| Spreed Tolerance cm3/1000 strokes : 6.0 | LOW IDLE |
| Check tolerance cm3/1000s. : 10.0 | control lever position degree : 247.0 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | tolerance degree : 247.0 tolerance degree : +- 4.0 Testing: |

| | | 1. |
|-----------------------------------|---|--|
| Rated speed rpm | : 300 | |
| rack travel mm | : -8.20 | + FUEL DELIVERY CHARACTERISTICS |
| Tolerance mm | : ← 0.10 | †, |
| Rated speed rpm | . 200 | + Aneroid pressure + hPa : 1000 |
| nated speed rpin | . 200 | Rated speed rpm : 600 |
| CRT mm max. | : < -6.80 | + Del. quantity |
| | | + cm3/1000 strokes : 74.0 |
| CONTINUOUS-ACTION | I CONTROL | Tolerance + cm3/1000 strokes : + 1.0 |
| COLAS TIADOOD - MC LTON | * CONTROL | Check tolerance |
| Rated speed rpm | : 365 | + cm3/1000s. : +- 4.0 |
| | | + Spreed |
| TORQUE CONTROL | A | Tolerance cm3/1000 strokes : 4.0 |
| TORRIDE CONTROL | | - Check tolerance |
| Rated speed rpm | : 1000 | - cm3/1000S. : 7.0 |
| Tolerance mm | : +- 0.10 | † |
| Dated speed nom | • 400 | + Aneroid pressure + hPa : 1000 |
| Rated speed rpm rack travel mm | : -4.50 | + hPa : 1000 + Rated speed rpm : 1000 |
| Tolerance mm | : +- 0.10 | + Del. quantity |
| | | + cm3/1000 strokes : 270.0 |
| ANDDOTA (AL TITUDE | | Tolerance |
| ANEROID/ALTITUDE COMPENSATOR TEST | | cm3/1000 strokes : +- 4.0 Check tolerance |
| CONTRACTOR TEST | | - cm3/1000s. : +- 7.0 |
| | | + |
| SETTING | | + Aneroid pressure |
| Pated speed rom | : 500 | + hPa : 1000 + Rated speed rpm : 600 |
| Rated speed rpm Pressure hPa | : 1000 | + Del. quantity |
| | , | + cm3/1000 strokes : 159.0 |
| MEASUREMENT | | + Tolerance |
| Pressure hPa | • | t cm3/1000 strokes : +- 5.0 + Check tolerance |
| Rated speed rpm | 500 | + cm3/1000s. : +- 8.0 |
| rack travel mm | : -3.80 | Spreed |
| Tolerance mm | : +- 0.30 | + Tolerance |
| Detect speed | . 500 | + cm3/1000 strokes : 8.0 |
| Rated speed rpm | : 500 | + Check tolerance + cm3/1000S. : 12.0 |
| Pressure hPa | : 240 | |
| rack travel mm | : -2.60 | Aneroid pressure |
| Tolerance mm | : +- 0.20 | + hPa : - |
| Pressure hPa | : 480 | Rated speed rpm : 500 Del. quantity |
| rack travel mm | : -0.75 | cm3/1000 strokes : 167.0 |
| Tolerance mm | : +- 0.05 | † Tolerance |
| | | + cm3/1000 strokes : +- 1.0 |
| START CUT-OUT | | |
| START COT COT | | T Chis/ (0003 4.0 |
| Rated speed rpm | : > 100 | |
| Check | | BREAKAWAY |
| speed 1/min Rated speed rpm | : > 80 : < 195 | 1 |
| Check | . 7 173 | T Rack travel in mm : −1.00 |
| speed 1/min | : < 215 | + Rated speed rpm : 1070 |

Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000S. : +- 14.0 LOW IDLE Rated speed rpm 300 -8.20 rack travel mm : + 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +-2.5 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

| BOSCH INJ. FUMP T | EST SPECIFICATIONS + | x length mm : 600 |
|---|--------------------------------------|--|
| Note remarks | ‡ | |
| Refer to Service adjustment instru See microcard(s) | | REMARKS Check electrically unlatched starting fuel delivery (EES) with 24 volt. |
| Edition Test oil | : 16.11.93 : ISO 4113 | |
| Combination No. | : 0402746937 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. |
| Injection pump Pump designation EP type number | : PES6P120A720RS7268 : 0412726884 | per values |
| Governor | 1 | BEGINNING OF DELIVERY |
| Governer design. Governer no. | : RQ275/1100PA915-2 : 0421801671 | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| Cust. part No. | : ‡ | Prestroke mm : 5.15 Tolerance mm : + 0.05 |
| | | test only : \leftarrow 0.10 |
| Customer-spec. in Customer Motor | : IVECO-UNIC + | Rack travel in mm : 10.50 Tolerance mm : +- 1.50 |
| TEST BENCH REQUIRE | EMENTS T | Firing order : 1-5-3-6-2- |
| Test oil inlet temp. °C Tolerance °C | : ← 40 : ← 2.0 | Phasing : 0-60-120-180-240 : -300 Tolerance : +- 0.30 |
| Overflow valve | : 1417413025 | Check tolerance °NW : +- 0.75 |
| Inlet press. bar Tolerance bar | : + 1.5 : + 0.1 | BEGINNING OF DELIVERY DIFFERENCE |
| Test nozzle holde assembly | : 1688901105 | Time to cyl. no. : 1 S.o.d. blocking Barrel no. : 1 |
| Opening pressure par Tolerance bar | : 208.5 : +- 1.5 | BASIC SETTING |
| Test lines | : 1680750089 | Del. quantity cm3/1000 strokes : 196.0 |
| Outside diameter | : 8.0 | Tolerance |
| | : 3.0 | cm $3/1000$ strokes : $+-$ 1.0 |

| Check tolerance cm3/1000s. | : +- 4.0 | rack travel mm Rated speed rpm Tolerance 1/min | : 4.00 : 1245 : +- 15 |
|---|---------------------|--|-----------------------------|
| Spreed Tolerance cm3/1000 strokes | : 5.0 | - rack travel mm - Tolerance mm - Rated speed rpm | : +- 0.50 |
| Check tolerance cm3/1000s. | : 9.0 | LOW IDLE | |
| Del. quantity cm3/1000 strokes | : 23.0 | | |
| Tolerance cm3/1000 strokes Check tolerance | _ | control lever position degree tolerance degree | |
| cm3/1000s. Spreed | : +- 6.0 | - Testing: | , ,,,, |
| Tolerance cm3/1000 strokes Check tolerance | | - - Rated speed rpm - rack travel mm | : 275 : 6.30 |
| cm3/1000s. | : 12.0 | - rack travel mm - Tolerance mm | |
| (B) SETTING OF IN WITH GOVERNOR | UECTION PUMP | rack travel mm Rated speed rpm Tolerance 1/min | : 2.00 : 365 : + 20 |
| | | - Rated speed rpm | : 100 |
| GUIDE SLEEVE POSI | TION | - CRT mm min. | : > 7.80 |
| Rated speed rpm | : 600 | • | |
| Rack travel in mm Tolerance mm | | ANEROID/ALTITUDE COMPENSATOR TEST | |
| | Y AT FULL LOAD STOP | - - - Measurement | |
| Rated speed rpm Aneroid pressure | 4 | · | : 240 |
| hPa Del. quantity | : 900 | rack travel mm Tolerance mm | : 9.50 |
| cm3/1000 strokes Tolerance cm3/1000 strokes | 4 | - Pressure hPa - rack travel mm | : 10.85 |
| Check tolerance cm3/1000s. | : +- 4.0 | Tolerance mm | : +- 0.05 |
| Spreed Tolerance cm3/1000 strokes | : 5.0 | FUEL DELIVERY CHA | PACTERISTICS |
| Check tolerance cm3/1000s. | 1 | Aneroid pressure | |
| RATED SPEED | | hPa Rated speed rpm Del. quantity | : 900 : 550 |
| | : 10.90 | cm3/1000 strokes Tolerance | : 216.0 |
| rack travel mm Rated speed rpm Tolerance 1/min | : 1153 | cm3/1000 strokes Check tolerance | : +- 3.0 |
| | + | cm3/1000s. | : +- 6.0 |

Aneroid pressure

Rated speed rpm 500

Del. quantity

cm3/1000 strokes : 112.0

Tolerance

cm3/1000 strokes : ← 1.0

Check tolerance

cm3/1000s. 4.0

BREAKAWAY

10.90 Rack travel in mm :

Rated speed rpm 1153 Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

110.0

cm3/1000 strokes : Tolerance

15.0

cm3/1000 strokes Check tolerance cm3/1000S.

: +- 19.0

LOW IDLE

Del. quantity cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance cm3/1000s.

6.0

Spreed

Tolerance

cm3/1000 strokes 8.0

Check tolerance cm3/1000s.

12.0

| Note remarks | EST SPECIFICATIONS - | x inside diameter : 2.0 x length mm : 600 |
|---|--|--|
| Refer to Service adjustment instru See microcard(s) | Info for test and | REMARKS |
| Edition Test oil | : 12.12.94 : ISO 4113 | - (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. |
| Combination No. | : 0402936001 | per values |
| Injection pump Pump designation EP type number | : PES6P120A320/3RS8012 : 0412926017 | BEGINNING OF DELIVERY |
| Governor Governer design. | : RQV3501100PA964 | - Test pressure bar : 31.0 - Tolerance bar : +- 1.0 - |
| Governer no. | : -1K : 0421815253 | - Prestroke mm : 4.40 - Tolerance mm : +- 0.05 |
| Cust. part No. | : | test only : + 0.10 |
| | | - Rack travel in mm : 10.50 - Tolerance mm : +- 1.50 |
| Customer—spec. in Customer Motor Power KW | : CDC : 6CTA US 94 | - - Firing order : 1-5-3-6-2 - - |
| TEST BENCH REQUIR | EMENTS | - - Phasing : 0-60-120-180-240 - : -300 |
| Test oil inlet temp. °C Tolerance °C | : 40 : +- 2.0 | Tolerance : +- 0.30 Check tolerance °NW : +- 0.50 |
| Overflow valve | : 2417413064 | - BASIC SETTING |
| inlet press. bar | : 2.5 | - Rated speed rpm : 1100 |
| est nozzle holde ssembly | : 1688901103 | Rack travel in mm : 12.05 Tolerance mm : +- 0.05 |
| opening pressure | : 208.5 | Del. quantity cm3/1000 strokes : 113.0 |
| Tolerance bar | : + 1.5 | Tolerance cm3/1000 strokes : +- 1.0 |
| est lines | + | Spreed Tolerance |
| Outside diameter | : 6.0 | - cm3/1000 strokes : 5.0 |

```
Check tolerance
cm3/1000S.
                        9.0
                                                rack travel mm
                                                                     11.00
                                                Rated speed rpm
                                                                     1145
                                                                : +-
2nd speed rpm :
                      350
                                                Tolerance 1/min
                       9.50
Rack travel in mm :
                                                                       4.00
                                                rack travel mm
                                                                     1265
Tolerance mm
                       0.10
                                                Rated speed rpm
Del. quantity
                                                Tolerance 1/min : +-
cm3/1000 strokes :
                       27.0
Tolerance
                                                rack travel mm
                                                                       0.50
                                                                 : 0.50
: ← 0.50
cm3/1000 strokes : \leftarrow 3.0
                                                Tolerance mm
                                                                 : 1380
Spreed
                                                Rated speed rpm
Tolerance
cm3/1000 strokes :
                        8.0
Check tolerance
                                                LOW IDLE
cm3/1000S.
                       12.0
                                                control lever
(B) SETTING OF INJECTION PUMP
                                                position degree :
                                                                       66.0
WITH GOVERNOR
                                                tolerance degree : +-
                                                control lever
                                                position degree
                                                                       11.0
GUIDE SLEEVE POSITION
                                                tolerance degree : +-
                                                Testing:
control lever
position degree
                                                                      350
                                               Rated speed rpm :
Rated speed rpm : 1310
                                                                       5.10
                                                rack travel mm
                                                Tolerance mm
                                                                 : + - 0.10
Rack travel in mm :
                       9.00
Tolerance mm : \leftarrow 3.00
                                                CONTINUOUS-ACTION CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP
                                               Rated speed rpm
                                                                      415
                     1100
Rated speed rpm
Aneroid pressure
                                               TORQUE CONTROL
hPa
                     1200
Del. quantity
                                                                     1100
                                               Rated speed rpm
cm3/1000 strokes :
                      113.0
                                                                      12.05
                                               rack travel mm
Tolerance
                                               Tolerance mm
                                                                 : ← 0.05
cm3/1000 strokes : \leftarrow 1.0
Spreed
                                                                     850
                                               Rated speed rpm
                                                                     13.30
Tolerance
                                               rack travel mm
cm3/1000 strokes :
                        5.0
                                                                 : +- 0.20
                                               Tolerance mm
Check tolerance
cm3/1000S.
                        9.0
                                               ANEROID/ALTITUDE
                                               COMPENSATOR TEST
RATED SPEED
                                               SETTING
control lever
position degree :
                       69.0
                                                                    1100
                                               Rated speed rpm
tolerance degree : +-
                                               Pressure hPa
                                                                     1200
                                               rack travel mm
                                                                    12.05
control lever
                                                                 : +- 0.05
                                               Tolerance mm
position degree
                      118.0
tolerance degree : \leftarrow 4.0
                                               MEASUREMENT
```

Pressure hPa : Rated speed rpm : 1100
rack travel mm : 9.80
Tolerance mm : +- 0.10

Rated speed rpm : 1100

Pressure hPa : 200 rack travel mm : 10.35 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa : -Rated speed rpm : 500

Del. quantity cm3/1000 strokes : 47.0

Tolerance

cm3/1000 strokes : +- 1.0

BREAKAWAY

Rack travel in mm : 11.00
Rated speed rpm : 1145
Tolerance 1/min : + 5

LOW IDLE

Rated speed rpm : 350
rack travel mm : 9.50
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 27.0
Tolerance
cm3/1000 strokes : + 3.0
Spreed

Tolerance

cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 12.12.94 Edition Test oil : ISO 4113 Combination No. : 0402936002 Injection pump Pump designation : PES6P120A120RS8013 EP type number : 0412726018 Governor Governer design. : RQV400...1250PA964K Governer no. : 0421815252 Cust. part No. : Customer-spec. information Customer : CDC : 6BTA US 94 Motor Power KW : 172.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C : ← 2.0 Overflow valve : 2417413064 Inlet press. bar : 2.5 Test nozzle holde : 1688901103 assembly Opening pressure 208.5 Tolerance bar : 1680750008 Test lines Outside diameter : 6.0 x inside diameter : 2,0

K25

```
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____
BEGINNING OF DELIVERY
Test pressure bar: 31.0
Tolerance bar : +- 1.0
Prestroke mm
                     4.40
                : +- 0.05
Tolerance mm
test only
                : +- 0.10
Rack travel in mm : 10.50
Tolerance mm
                : +- 1.50
                 : 1-5-3-6-2-
Firing order
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                : +- 0.30
Check
tolerance °NW
                : + - 0.50
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. : 1
BASIC SETTING
Rated speed rpm :
                    1100
Rack travel in mm: 12.05
Tolerance mm : \leftarrow 0.05
(B) SETTING OF INJECTION PUMP
WITH GOVERNOR
```

x Length mm : 600

| GUIDE SLEEVE POSI | TION |
|--|------------------------------|
| control lever position degree Rated speed rpm | : - 1 : 1470 |
| Rack travel in mm Tolerance mm | : 9.00 : +- 3.00 |
| FULL LOAD DELIVER | Y AT FULL LOAD STOP |
| Rated speed rpm Aneroid pressure | : 1100 |
| hPa | : 1200 |
| RATED SPEED | |
| control lever position degree tolerance degree | : 56.0 : + 4.0 |
| control lever position degree tolerance degree | : 113.0 : + 4.0 |
| rack travel mm Rated speed rpm Tolerance 1/min | : 11.00 : 1295 : + 5 |
| rack travel mm Rated speed rpm Tolerance 1/min | : 4.00 : 1435 : + 15 |
| rack travel mm Tolerance mm Rated speed rpm | : 0.50 : ← 0.50 : 1500 |
| LOW IDLE | |
| control lever position degree tolerance degree | : 70.0 : +- 4.0 |
| control lever position degree tolerance degree | |
| Testing: | |
| Rated speed rpm rack travel mm Tolerance mm | : 400 : 5.10 : ← 0.10 |

| CONTINUOUS-ACTION | CONTROL |
|---|---|
| Rated speed rpm | : 475 |
| TORQUE CONTROL | |
| Rated speed rpm rack travel mm Tolerance mm | : 1100 : 12.05 : +- 0.05 |
| ANEROID/ALTITUDE COMPENSATOR TEST | |
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 1250 : 1200 : 12.05 : ← 0.05 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 1250 : 8.50 : + 0.10 |
| Rated speed rpm | : 1250 |
| Pressure hPa rack travel mm Tolerance mm | : 200 : 9.05 : +- 0.05 |
| FUEL DELIVERY CHAR | ACTERISTICS |
| Aneroid pressure hPa Rated speed rpm | : - : 500 |
| BREAKAWAY | |
| Rack travel in mm Rated speed rpm Tolerance 1/min | : 11.00 : 1295 : + 5 |

| BUSCH INJ. PUMP 1 | EST SPECIFICATIONS | + Outside diameter : 8.0 |
|---|--|--|
| Note remarks | | x inside diameter: 3.0 x length mm: 600 |
| Refer to Service adjustment instru See microcard(s) | Info for test and uctions. W400/ | |
| Edition Test oil | : 19.01.95 : ISO 4113 | REMARKS |
| Combination No. | : 0401646003 | Ť (1) |
| njection pump vump designation | : PES6R120/720LS1505 : -1 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| EP type number | : 0411626005 | BEGINNING OF DELIVERY |
| lovernor loverner design. loverner no. | : RQV3001100R3K : 0421415004 | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| ust. part No. | : 51.11103-7393 | Prestroke mm : 5.45 Tolerance mm : +- 0.05 |
| | formation. | † test only : ← 0.10 |
| Customer-spec. in Customer Motor Power KW | : MAN : D2866LE401 | Rack travel in mm : 12.00 Tolerance mm : +- 0.50 |
| | . 440.0 | Firing order : 6-2-4-1-5 |
| EST BENCH REQUIR | EMENTS | . 3 - |
| est oil inlet emp. °C | : 40 | Phasing : 0-60-120-180-240 : -300 |
| olerance °C | : ← 2.0 | Tolerance : + 0.30 Check |
| verflow valve | : 1417413025 | tolerance °NW : +- 0.75 |
| nlet press. bar olerance bar | : 1.5 : +- 0.1 | BEGINNING OF DELIVERY DIFFERENCE |
| occidino bui | - | Time to cyl. no. : 6 |
| est nozzle holde ssembly | : 1688901105 | |
| pening pressure | | BASIC SETTING |
| ar olerance bar | : 208.5 : + 1.5 | Rated speed rpm : 1100 |
| ube oil | : 1409918004 | Rack travel in mm : 15.30 Tolerance mm : +- 0.05 |
| 12 | : 1680750089 | - |

F05

| Del. quantity cm3/1000 strokes : 385.0 | travel mm : 2.90 Tolerance mm : +- 0.25 |
|---|---|
| Tolerance cm3/1000 strokes : +- 1.0 | Rated speed rpm : 510 |
| Check tolerance cm3/1000s. : + 4.0 | travel mm : 4.02 Tolerance mm : +- 0.25 |
| Spreed Tolerance cm3/1000 strokes : 6.0 | Rated speed rpm : 1430 guide sleeve travel mm : 13.50 Tolerance mm : + 0.50 |
| Check tolerance cm3/1000s. : 10.0 | |
| 2nd speed rpm : 325 | GUIDE SLEEVE POSITION |
| Rack travel in mm : 5.10 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 20.0 | control lever position degree : - 1 Rated speed rpm : 1230 |
| Tolerance cm3/1000 strokes : +- 3.0 Check tolerance | Rack travel in mm : 14.30 Tolerance mm : + 1.30 |
| cm3/1000s. : +- 6.0 Spreed | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Tolerance cm3/1000 strokes : 10.0 Check tolerance | Rated speed rpm : 1100 Aneroid pressure |
| cm3/1000s. : 14.0 (B) SETTING OF INJECTION PUMP | hPa : 2500 Del. quantity cm3/1000 strokes : 385.0 |
| WITH GOVERNOR | Tolerance cm3/1000 strokes : + 1.0 Check tolerance |
| GUIDE SLEEVE TRAVEL | + cm3/1000s. : +- 4.0 + Spreed |
| Rated speed rpm : 325 guide sleeve travel mm : 2.12 Tolerance mm : + 0.25 | Tolerance : 6.0 Check tolerance : 10.0 |
| Rated speed rpm : 1164 guide sleeve | RATED SPEED |
| travel mm : 10.04 Tolerance mm : + 0.25 | control lever + position degree : 122.0 |
| Rated speed rpm : 826 guide sleeve | tolerance degree : +- 4.0 |
| travel mm : 6.86 Tolerance mm : +- 0.25 | rack travel mm : 14.30 Rated speed rpm : 1152 Tolerance 1/min : +- 8 |
| Rated speed rpm : 338 guide sleeve travel mm : 2.28 | rack travel mm : 4.00 Rated speed rpm : 1295 |
| Tolerance mm : + 0.25 | Tolerance 1/min : + 15 |
| Rated speed rpm : 388 | + rack travel mm : 0.50 |

| Tolerance mm Rated speed rpm | : +- 0.50 : 1425 | Pressure hPa : 300 rack travel mm : 8.60 Tolerance mm : +- 0.05 |
|---|--|--|
| LOW IDLE | | ‡ |
| control lever position degree tolerance degree | : 76.0 : ← 4.0 | Rated speed rpm : > 100 Check |
| Testing: | | speed 1/min : > 80 Rated speed rpm : < 260 Check |
| Rated speed rpm rack travel mm Tolerance mm | : 325 : 5.10 : +- 0.10 | speed 1/min : < 280 |
| Rated speed rpm | | FUEL DELIVERY CHARACTERISTICS |
| CRT mm min. | | Aneroid pressure hPa : 2500 Rated speed rpm : 900 |
| CONTINUOUS-ACTION | N CONTROL | Del. quantity cm3/1000 strokes : 353.0 |
| Rated speed rpm | : 350 | Tolerance cm3/1000 strokes : +- 3.0 Check tolerance |
| TORQUE CONTROL | | |
| Rated speed rpm rack travel mm Tolerance mm | : 15.30 | Aneroid pressure hPa : 2500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 327.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 900 : 13.90 : +- 0.10 | cm3/1000 strokes : 327.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance |
| Rated speed rpm rack travel mm Tolerance mm | : 700 : 12.60 | Aneroid pressure hPa : - |
| ANEROID/ALTITUDE COMPENSATOR TEST | ······································ | Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 187.0 Tolerance cm3/1000 strokes : + 1.0 |
| SETTING | | Check tolerance cm3/1000s. : +- 4.0 |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 2500 : 15.30 | BREAKAWAY |
| MEASUREMENT | | Rack travel in mm : 14.30 Rated speed rpm : 1152 |
| Rated speed rpm | : 1100 | Tolerance 1/min : +- 8 |
| Pressure hPa rack travel mm Tolerance mm | : 13.70 | STARTING FUEL DELIVERY |

100 Rated speed rpm Del. quantity

cm3/1000 strokes : 555.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s.

: +- 24.0

LOW IDLE

325 Rated speed rpm 5.10 rack travel mm : + 0.20 Tolerance mm Del. quantity

cm3/1000 strokes : 0.09

Tolerance

cm3/1000 strokes 3.0

Check tolerance cm3/1000S.

6.0 Spreed

Tolerance

cm3/1000 strokes : 10.0

Check tolerance

cm3/1000S. 14.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 19.01.95 : ISO 4113 Test oil Combination No. : 0401840771 Injection pump Pump designation : PE12P12OA520/4LS3854 EP type number : 0411820728 Governor Governer design. : RQ950PA664-3 Governer no. : 0421801629 Cust. part No. : Customer—spec. information : MAN Customer : D2842LE Motor Power KW : 443.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413025 Inlet press. bar : 1.5 Test nozzle holde : 1688901019 assembly Opening pressure 208.5 Tolerance bar : 1680750075 Test lines

```
x length mm : 1000
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : \leftarrow 1.0
                       4.25
Prestroke mm
Tolerance mm
test only
                  : + 0.10
Rack travel in mm: 10.50
Tolerance mm
                  : 12- 1- 5- 9- 8
: - 3- 4- 11- 10
: - 2- 6- 7
Firing order
Phasing
                 : 0-45-60-105-120
                  : -165-180-225-240
                 : -285-300-345
Tolerance
                 : +- 0.35
Check
tolerance °NW
                  : + - 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. : 12
BASIC SETTING
                       700
Rated speed rpm
Rack travel in mm :
                      13.05
                  : +- 0.05
Tolerance mm
Del. quantity
cm3/1000 strokes :
                      251.0
```

L06

Outside diameter :

x inside diameter:

8.0

3.0

| Tolerance cm3/1000 strokes | : +- 1.0 | Tolerance mm : +- 0.50 Rated speed rpm : 1400 |
|--|----------------------------|---|
| Check tolerance cm3/1000s. | : +- 4.0 | LOW IDLE |
| Spreed Toterance | | Testing: |
| cm3/1000 strokes Check tolerance | 5.0 | Rated speed rpm : 250 rack travel mm : 4.60 Tolerance mm : +- 0.10 |
| cm3/1000S. | : 9.0 | |
| Del. quantity cm3/1000 strokes Tolerance | : 20.0 | TORQUE CONTROL Rated speed spec 4 700 |
| cm3/1000 strokes Check tolerance | : ← 3.0 <u> </u> | Rated speed rpm : 700 rack travel mm : 13.05 Tolerance mm : +- 0.05 |
| cm3/1000S. Spreed Tolerance | : + 6.0 | |
| cm3/1000 strokes Check tolerance | : 8.0 | |
| cm3/1000S. | : 12.0 | BREAKAWAY |
| Rated speed rpm | RY AT FULL LOAD STOP : 700 | Rated speed rpm : 1025 Tolerance 1/min : +- 5 |
| Aneroid pressure hPa Del. quantity | : - | LOW IDLE |
| cm3/1000 strokes Tolerance | + | Del. quantity cm3/1000 strokes : 20.0 |
| cm3/1000 strokes Check tolerance cm3/1000s. | : + 1.0 : + 4.0 | Tolerance cm3/1000 strokes : +- 3.0 Check tolerance |
| Spreed Tolerance | ‡ | cm3/1000S. : +- 6.0 Spreed |
| cm3/1000 strokes Check tolerance cm3/1000S. | : 5.0 | Tolerance cm3/1000 strokes : 8.0 Check tolerance |
| | | cm3/1000\$. : 12.0 |
| RATED SPEED | ‡ | |
| rack travel mm Rated speed rpm Tolerance 1/min | : 12.00 : 1025 : + 5 | |
| rack travel mm Rated speed rpm Tolerance 7/min | : 1085 | |
| rack travel mm | : 0.50 | |

| | + | Outside diameter : 8.0 |
|---|-----------------------------------|--|
| BOSCH INJ. PUMP T | EST SPECIFICATIONS | x inside diameter : 3.0 |
| Note remarks | + | x inside diameter : 3.0 x length mm : 600 |
| Refer to Service adjustment instru See microcard(s) | | REMARKS |
| Edition Test oil | : 19.01.95 : ISO 4113 | (A) TALIFOTTON DUMP OF TTANC HALLIED |
| Combination No. | : 0401840777 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Injection pump Pump designation | : PE12P120A520/4L\$3840 + -1 | BEGINNING OF DELIVERY |
| EP type number | • • | |
| Governor Governer design. | : RQV250900PA1198 : 0421814117 | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Cust. part No. | ‡ | Prestroke mm : 4.25 Tolerance mm : +- 0.05 |
| cust. part No. | · | test only : \leftarrow 0.10 |
| Customer spec. in | formation + DAEWOO + | Rack travel in mm : 10.50 Tolerance mm : +- 1.50 |
| Customer Motor Power KW | : D2842LE : 440.0 | Firing order : 12- 1- 5- 9- 8 : - 3- 4- 11- 10 : - 2- 6- 7 |
| TEST BENCH REQUIR | EMENTS | |
| Test oil inlet temp. °C Tolerance °C | : 40 : + 2.0 | Phasing : 0-45-60-105-120 : -165-180-225-240 : -285-300-345 Tolerance : + 0.30 Check |
| Overflow valve | : 1417413025 | tolerance °NW : +- 0.75 |
| Inlet press. bar | : 1.5 | BEGINNING OF DELIVERY DIFFERENCE |
| Test nozzle holde assembly | | Time to cyl. no. : 12 |
| Opening pressure | | BASIC SETTING |
| bar Tolerance bar | : 208.5 : + 1.5 | Rated speed rpm : 650 |
| Lube oil | : 1409918004 | Pack traval in mr. 11 /0 |
| | T | Rack travel in mm : 11.40 Tolerance mm : +- 0.05 |

| Del. quantity cm3/1000 strokes : 196.0 | + Spreed + Tolerance + cm3/1000 strokes : 6.0 |
|---|--|
| Tolerance cm3/1000 strokes : + 1.0 | + Check tolerance - cm3/1000S. : 10.0 |
| Check tolerance cm3/1000s. : + 4.0 | RATED SPEED |
| Spreed Tolerance cm3/1000 strokes : 6.0 | control lever position degree : 83.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. : 10.0 | control lever |
| 2nd speed rpm : 250 | position degree : 118.0 tolerance degree : +- 4.0 |
| Rack travel in mm : 6.90 Tolerance mm : + 0.30 Del. quantity | rack travel mm : 10.40 Rated speed rpm : 945 Tolerance 1/min : +- 5 |
| cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +- 3.0 | rack travel mm : 4.00 Rated speed rpm : 1055 |
| Check tolerance - cm3/1000S. : +- 6.0 - Spreed - Tolerance - cm3/1000S. | Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50 |
| cm3/1000 strokes : 8.0 - Check tolerance | Rated speed rpm : 1150 |
| cm3/1000s. : 12.0 - | LOW IDLE |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 65.0 tolerance degree : +- 4.0 |
| GUIDE SLEEVE POSITION | control lever position degree : 30.0 tolerance degree : +- 4.0 |
| control lever position degree : - 1 Rated speed rpm : 1060 | Testing: |
| Rack travel in mm : 10.40 Tolerance mm : +- 1.30 | Rated speed rpm : 250 rack travel mm : 6.90 Tolerance mm : +- 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | Rated speed rpm : 150 |
| Rated speed rpm : 650 | CRT mm min. : > 7.80 |
| Aneroid pressure hPa : Del. quantity - | CONTINUOUS-ACTION CONTROL |
| cm3/1000 strokes : 196.0 - Tolerance - | Rated speed rpm : 350 |
| cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 | TORQUE CONTROL |
| Silver 1999 Control 1999 | ı |

| Rated speed rpm rack travel mm Tolerance mm | : 11.40 : +- 0.05 |
|--|-------------------------------|
| Rated speed rpm rack travel mm Tolerance mm | : 900 : 11.40 : +- 0.10 |
| START CUT-OUT | |
| Rated speed rpm Check | |
| speed 1/min Rated speed rpm Check | : > 80 : < 170 |
| speed 1/min | : < 190 |
| FUEL DELIVERY CHAI | RACTERISTICS |
| Aneroid pressure hPa | : - |
| Rated speed rpm | 900 |
| Del. quantity cm3/1000 strokes | : 184.0 |
| Tolerance | |
| cm3/1000 strokes | : +- 3.0 |
| Check tolerance cm3/1000s. | : +- 6.0 |
| BREAKAWAY | |
| Rack travel in mm | |
| Rated speed rpm Tolerance 1/min | |
| DESCRIPTION OF THE PARTY OF THE | |
| STARTING FUEL DELI | |
| Rated speed rpm Del. quantity | : 100 |
| cm3/1000 strokes Folerance | : 310.0 |
| cm3/1000 strokes | : ← 20.0 |
| Check tolerance cm3/1000s. | : +- 24.0 |
| | |
| OW IDLE | |
| Rated speed rpm | : 250 |

Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05.05.94 Test oil : ISO 4113

Combination No. : 0401846926AA

Injection pump

Pump designation : PE6P110A720RS3040-2

EP type number : 0411816774

Governor

Governer design. : RQV200...1100PA555

-4

Governer no. : 0421813878

Cust. part No. :

Customer—spec. information Customer : SCANIA Motor : DS11

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test Lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.35 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50Tolerance mm : $\leftarrow 1.50$

Firing order : 1-5-3-6-2-

. 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance "NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.95

Tolerance mm : +- 0.05

| cm3/1000 strokes | : 172.0 | Spreed Tolerance cm3/1000 strokes : 8.0 |
|---|---|---|
| Tolerance cm3/1000 strokes | : + 1.0 | Check tolerance cm3/1000s. : 12.0 |
| Check tolerance cm3/1000s. | : + 4.0 | RATED SPEED |
| Spreed Tolerance cm3/1000 strokes | : 8.0 | control lever position degree : 61.0 tolerance degree : + 4.0 |
| Check tolerance cm3/1000s. | : 12.0 | control lever position degree : 116.0 |
| 2nd speed rpm | : 250 | tolerance degree : +- 4.0 |
| Rack travel in mm Tolerance mm Del. quantity | : + 0.30 | rack travel mm : 11.90 Rated speed rpm : 1145 Tolerance 1/min : +- 5 |
| cm3/1000 strokes Tolerance cm3/1000 strokes | + | rack travel mm : 4.00 Rated speed rpm : 1290 |
| Check tolerance cm3/1000S. Spreed | : ← 6.0 | Tolerance 1/min : + 15 rack travel mm : 0.50 |
| Tolerance cm3/1000 strokes Check tolerance | + | Tolerance mm : +- 0.50 Rated speed rpm : 1400 |
| cm3/1000s. | : 8.0 | LOW IDLE |
| (B) SETTING OF INJ WITH GOVERNOR | JECTION PUMP | control lever position degree : 69.0 tolerance degree : + 4.0 |
| CHINE OF EDIE DOCT | LION | control lever |
| | + | position degree : 16.0 tolerance degree : + 4.0 |
| control lever | : - 1 : 1070 | position degree : 16.0 tolerance degree : + 4.0 Testing: |
| control lever position degree Rated speed rpm Rack travel in mm | : 1070 + | position degree : 16.0 tolerance degree : + 4.0 |
| control lever position degree Rated speed rpm Rack travel in mm Tolerance mm | : 1070 : 16.50 : + 1.30 | position degree : 16.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 |
| control lever position degree Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVERY | : 1070 : 16.50 : + 1.30 AT FULL LOAD STOP : 700 | position degree : 16.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : + 0.10 |
| control lever position degree Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa | : 1070 : 16.50 : + 1.30 AT FULL LOAD STOP : 700 | position degree : 16.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : + 0.10 Rated speed rpm : 150 |
| control lever position degree Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance | : 1070 : 16.50 : + 1.30 (AT FULL LOAD STOP : 700 : - | position degree : 16.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 5.50 |

| Rated speed rpm rack travel mm Tolerance mm | : 700 : 12.95 : +- 0.05 |
|---|---|
| Rated speed rpm rack travel mm Tolerance mm | : 1000 : 12.95 : +- 0.05 |
| ANEROID/ALTITUDE COMPENSATOR TEST | |
| SETTING | |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 1500 : 12.95 : +- 0.05 |
| MEASUREMENT | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 500 : 10.60 : +- 0.20 |
| Rated speed rpm | : 500 |
| Pressure hPa Tolerance mm | : |
| Pressure hPa Tolerance mm | : - : +- 0.10 |
| FUEL DELIVERY CHA | RACTERISTICS |
| Aneroid pressure | : - |
| Rated speed rpm Del. quantity cm3/1000 strokes | : 1000 : 164.0 |
| Tolerance cm3/1000 strokes | : +- 4.0 |
| Check tolerance cm3/1000s. | : ← 6.0 |
| Aneroid pressure hPa | : ~ : 500 |
| Rated speed rpm Del. quantity cm3/1000 strokes | : 114.0 |
| | . 117.0 |
| Tolerance cm3/1000 strokes | : 1.0 |

BREAKAWAY

Rack travel in mm : 11.90
Rated speed rpm : 1145
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : 10.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : 100

LOW IDLE

Rated speed rpm : 250 rack travel mm : 7.20 Tolerance mm : **←** 0.30 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance : +cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

| | 1 | |
|--|---------------------------------------|--|
| BOSCH INJ. PUMP | TEST SPECIFICATIONS | Outside diameter : 6.0 |
| Note remarks | | x inside diameter: 2.0 |
| Refer to Service adjustment instru See microcard(s) | Info for test and uctions. | x length mm : 600 |
| | + | REMARKS |
| Edition Test oil | : 17.06.94 : ISO 4113 | Check and set without ROBO diaphragam |
| Combination No. | : 0401846987 | |
| Injection pump Pump designation EP type number Governor | : PE6P110A720RS3289-1 : 0411816795 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| | : RQ750PA1153-1 | |
| Governer no. | | BEGINNING OF DELIVERY |
| Cust. part No. | : 1363596 | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Customer-spec. in | | Prestroke mm : 3.35 Tolerance mm : + 0.05 |
| Customer Motor | : DS1193A | test only : +- 0.10 |
| TEST BENCH REQUIR | REMENTS | Rack travel in mm : 10.50 Tolerance mm : +- 1.50 |
| Test oil inlet temp. °C Tolerance °C | : | Firing order : 1-5-3-6-2- : 4 |
| Overflow valve | : 1417413025 | Phasing : 0-60-120-180-240 : -300 Tolerance : +- 0.30 |
| | + | Check |
| Inlet press. bar Tolerance bar | | tolerance °NW : +- 0.75 |
| Tolerance l/h | : ← 10.0 T | BEGINNING OF DELIVERY DIFFERENCE |
| Test nozzle holde assembly | : 1688901104 | Time to cyl. no. : 1 |
| Opening pressure bar Tolerance bar | : 251.5 : +- 1.5 | BASIC SETTING |
| Lube oil | : 1409918004 | Rated speed rpm : 700 |
| Test lines | : 1680750008 | Rack travel in mm : 12.35 Tolerance mm : +- 0.05 |

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| | 4 | Check tolerance |
|--|---------------------|--|
| Del. quantity cm3/1000 strokes | : 172.0 | cm3/1000s. : +- 4.0 Spreed |
| Tolerance cm3/1000 strokes | : + 1.0 | Tolerance cm3/1000 strokes : 8.0 Check tolerance |
| Check tolerance cm3/1000s. | : + 4.0 | cm3/1000s. : 12.0 |
| Spreed | | RATED SPEED |
| Tolerance cm3/1000 strokes | : 8.0 | control lever position degree : 36.0 |
| Check tolerance cm3/1000s. | : 12.0 | tolerance degree : +- 4.0 |
| (B) SETTING OF IN WITH GOVERNOR | NECTION PUMP | control lever position degree : 98.0 tolerance degree : +- 4.0 |
| GUIDE SLEEVE TRAV | EL | TORQUE CONTROL |
| Rated speed rpm guide sleeve travel mm | : 759 | Rated speed rpm : 700 rack travel mm : 12.35 Tolerance mm : +- 0.05 |
| Tolerance mm | : + 0.10 | Toterarice inii : +- U.U. |
| Rated speed rpm guide sleeve | + | ANEROID/ALTITUDE COMPENSATOR TEST |
| travel mm Tolerance mm | : -5.40 : + 0.10 | SETTING |
| Rated speed rpm guide sleeve | : 850 | Rated speed rpm : 500 |
| travel mm Tolerance mm | : 17.21 : + 0.10 | Pressure hPa : 1500 rack travel mm : 12.35 Tolerance mm : + 0.05 |
| Rated speed rpm guide sleeve | + | MEASUREMENT . 44 0.03 |
| travel mm Tolerance mm | : 10.00 : + 0.10 | Pressure hPa : - Rated speed rpm : 500 |
| Rated speed rpm guide sleeve | + | rack travel mm : 10.00 Tolerance mm : +- 0.20 |
| travel mm Tolerance mm | : 11.50 : + 0.50 | Rated speed rpm : 500 |
| | Y AT FULL LOAD STOP | Pressure hPa : 200 rack travel mm : 11.75 Tolerance mm : +- 0.05 |
| Rated speed rpm Aneroid pressure hPa | : 700 + | Pressure hPa : 140 rack travel mm : 10.80 Tolerance mm : +- 0.15 |
| Del. quantity cm3/1000 strokes | + | Tolerance mm : +- 0.15 |
| Tolerance cm3/1000 strokes | : + 1.0 | FUEL DELIVERY CHARACTERISTICS |

Aneroid pressure hPa 500 Rated speed rpm Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. 4.0 Aneroid pressure hPa Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 4.0 Check tolerance cm3/1000s. 6.0 Tolerance cm3/1000 strokes 5.0 Check tolerance cm3/1000S. 9.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

BOSCH INJ. PUMP TEST SPECIFICATIONS x inside diameter : 2.0 x length mm : 600 Note remarks Refer to Service Info for test and adjustment instructions. REMARKS See microcard(s) W400/... : 04.01.95 Edition : ISO 4113 Test oil (A) INJECTION PUMP SETTING VALUES Combination No. : 0402046856 Set equal delivery quant. per values Injection pump Pump designation : PE6P110A320RS3329Z EP type number : 0412016744 BEGINNING OF DELIVERY Governor Test pressure bar : 31.0 Governer design. : RQV325...1300PA1119 1.0 Tolerance bar : 0421814083 Governer no. Prestroke mm 4.85 Cust. part No. : 1284417/3 Tolerance mm : +- 0.05 test only : +- 0.10Customer—spec. information Rack travel in mm : 20.50 : +- 0.50 Customer : DAF Tolerance mm : NS133M Motor Power KW : 133.0 : 1-5-3-6-2-Firing order TEST BENCH REQUIREMENTS Phasing : 0-60-120-180-240 Test oil inlet : -300 temp. °C 40 Tolerance : +- 0.30 Tolerance °C 2.0 Check tolerance "NW : ← 0.75 Overflow valve : 1417413025 BEGINNING OF DELIVERY DIFFERENCE Inlet press. bar Tolerance bar : + - 0.1Time to cyl. no. : Test nozzle holde assembly : 1688901101 BASIC SETTING Opening pressure Rated speed rpm 1000 208.5 1.5 Tolerance bar Rack travel in mm : 11.85 : +- 0.05 Tolerance mm Test lines : 1680750008 Del. quantity Outside diameter : 6.0 cm3/1000 strokes : 146.0

| Tolerance cm3/1000 strokes : +- 1.0 | Rated speed rpm : 530 guide sleeve |
|--|--|
| Check tolerance cm3/1000s. : +- 4.0 | travel mm : 2.93 Tolerance mm : +- 0.25 |
| Spreed Tolerance cm3/1000 strokes : 4.0 | Rated speed rpm : 1640 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 |
| Check tolerance cm3/1000s. : 7.5 | CUIDE CLECKE DOCUTION |
| 2nd speed rpm : 325 | GUIDE SLEEVE POSITION |
| Rack travel in mm: 5.20 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 26.0 Tolerance cm3/1000 strokes: + 2.5 Check tolerance cm3/1000s: + 5.0 | control lever position degree : - 1 Rated speed rpm : 1450 Rack travel in mm : 10.80 Tolerance mm : +- 1.30 |
| Spreed Tolerance | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes : 12.0 Check tolerance cm3/1000S. : 15.0 | Rated speed rpm : 1000 Aneroid pressure hPa : 1000 Del. quantity |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | - cm3/1000 strokes : 146.0 Tolerance - cm3/1000 strokes : +- 1.0 Check tolerance |
| GUIDE SLEEVE TRAVEL | |
| Rated speed rpm : 325 guide sleeve travel mm : 1.33 Tolerance mm : +- 0.15 | cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 |
| Rated speed rpm : 1353 guide sleeve | RATED SPEED |
| travel mm : 8.29 Tolerance mm : + 0.20 | control lever position degree : 122.0 |
| Rated speed rpm : 900 guide sleeve travel mm : 4.92 | tolerance degree : + 4.0 rack travel mm : 10.85 |
| Toterance mm : + 0.25 Rated speed rpm : 405 | Rated speed rpm : 1342 Tolerance 1/min : + 5 |
| guide sleeve travel mm : 2.07 Tolerance mm : +- 0.25 | rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15 |
| Rated speed rpm : 455 guide sleeve travel mm : 2.52 Tolerance mm : +- 0.25 | rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1600 |

| | | Pressure hPa : 310 |
|---|--|---|
| LOW IDLE | | Pressure hPa : 310 rack travel mm : 10.55 Tolerance mm : + 0.05 |
| control lever position degree tolerance degree | : 83.0 : +- 4.0 | Pressure hPa : 130 rack travel mm : 7.85 Tolerance mm : + 0.10 |
| Testing: | | FIG. ACLIUCDY CHADACTERICTICS |
| Rated speed rpm rack travel mm Tolerance mm | : 4.50 : + 0.10 | FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1000 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 145.0 |
| CRT mm min. | : > 6.00 | + Tolerance + cm3/1000 strokes : +- 2.0 |
| CONTINUOUS-ACTION | CONTROL | Check tolerance : +- 5.0 |
| Rated speed rpm | : 375 | Aneroid pressure hPa : - |
| TORQUE CONTROL | | Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 88.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 1000 : 11.85 : +- 0.05 | + Tolerance + cm3/1000 strokes : +- 1.0 + Check tolerance |
| Rated speed rpm rack travel mm Tolerance mm | : 700 : 11.85 : +- 0.05 | + cm3/1000s. : +- 3.5 |
| Rated speed rpm rack travel mm Tolerance mm | : 1300 : 11.85 : ← 0.05 | Rack travel in mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | + + |
| SETTING | | LOW IDLE |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 600 : 1000 : 11.85 : + 0.05 | Rated speed rpm : 325 rack travel mm : 5.20 Tolerance mm : +- 0.10 |
| MEASUREMENT | | Del. quantity cm3/1000 strokes : 26.0 Tolerance |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 600 : 6.60 : + 0.20 | cm3/1000 strokes : + 2.5 Check tolerance cm3/1000s. : + 5.0 Spreed |
| Rated speed rpm | : 600 | Tolerance cm3/1000 strokes : 12.0 |

Check tolerance cm3/1000s. : 15.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 04.07.94 : ISO 4113 Test oil Combination No. : 0402646604 Injection pump Pump designation : PE6P12DA72DRS7188 : -10 EP type number : 0412626924 Governor : RQV350...1050PA795 Governer design. : -13 : 0421814017 Governer no. : 1337549 Cust. part No. Customer-spec. information Customer : SCANIA Motor : DS11 Allvarv TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C : 1417413025 Overflow valve Inlet press. bar Tolerance bar Test nozzle holde : 1688901104 assembly Opening pressure Tolerance bar

: 1680750008

6.0

```
x inside diameter :
                        2.0
x length mm :
REMARKS
 Check and set without ROBO diaphragam
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values
BEGINNING OF DELIVERY
Test pressure bar :
                       1.0
Tolerance bar
Prestroke mm
                      4.45
Tolerance mm
                 : + 0.05
                 : +- 0.10
test only
Rack travel in mm: 10.50
                : +- 1.50
Tolerance mm
                 : 1-5-3-6-2-
Firing order
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : + 0.30
Check
tolerance °NW
                 : +- 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
                     700
Rated speed rpm
Rack travel in mm :
                 : +- 0.05
Tolerance mm
```

Test lines

Outside diameter :

| Del. quantity - cm3/1000 strokes : 236.0 - | Spreed Tolerance |
|---|--|
| Tolerance - cm3/1000 strokes : + 1.0 - | cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 |
| Check tolerance cm3/1000s. : +- 4.0 | RATED SPEED |
| Spreed Tolerance cm3/1000 strokes : 8.0 | control lever position degree : 45.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. : 12.0 | - control lever |
| 2nd speed rpm : 350 | - position degree : 102.0 - tolerance degree : +- 4.0 |
| Rack travel in mm: 4.70 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 19.0 | - rack travel mm : 12.30 - Rated speed rpm : 1095 - Tolerance 1/min : +- 5 |
| Tolerance - cm3/1000 strokes : +- 3.0 - Check tolerance - | rack travel mm : 4.00 Rated speed rpm : 1230 Tolerance 1/min : +- 15 |
| cm3/1000s. : +- 6.0 Spreed Tolerance | - rack travel mm : 0.50 - Tolerance mm : +- 0.50 |
| cm3/1000 strokes : 4.0 Check tolerance | - Rated speed rpm : 1350 |
| cm3/1000s. : 8.0 | LOW IDLE |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | - - control lever - position degree : 72.0 - tolerance degree : +- 4.0 |
| GUIDE SLEEVE POSITION control lever | - control lever - position degree : 15.0 - tolerance degree : +- 4.0 |
| position degree : -1 Rated speed rpm : 1280 | - Testing: |
| Rack travel in mm : 12.00 Tolerance mm : + 1.00 | - Rated speed rpm : 350 - rack travel mm : 4.70 - Tolerance mm : +- 0.10 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | - Rated speed rpm : 250 |
| Rated speed rpm : 700 | - CRT mm min. :> 8.00 |
| Aneroid pressure hPa : - Del. quantity | - CONTINUOUS-ACTION CONTROL |
| cm3/1000 strokes : 236.0 + Tolerance + Tolerance | Rated speed rpm : 300 |
| cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 | TORQUE CONTROL |
| 7 | |

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| Rated speed rpm rack travel mm | : 700 · 13 35 | † | | |
|---|--|---|---|---------------------------------|
| Tolerance mm | : 13.35 : + 0.05 | 1 | BREAKAWAY | |
| Rated speed rpm rack travel mm Tolerance mm | : 1050 : 13.35 : ← 0.05 | + | Rack travel in mm Rated speed rpm Tolerance 1/min | : 1095 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | + | STARTING FUEL DEL | IVERY |
| SETTING | | + | Rated speed rpm | : 100 |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 1500 : 13.35 : ← 0.05 | + | rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance | : + 0.20 : 170.0 : + 20.0 |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 500 : 10.40 : ← 0.20 | † † † | cm3/1000s. | : +- 24.0 |
| Rated speed rpm | : 500 | + | LOW IDLE | 750 |
| Pressure hPa rack travel mm Tolerance mm | : 440 : 12.05 : ← 0.05 | ‡ ! ‡ ! | Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes | : 4.70 : + 0.30 |
| Pressure hPa rack travel mm Tolerance mm | : 11.00 | + · · · · · · · · · · · · · · · · · · · | Tolerance cm3/1000 strokes Check tolerance cm3/1000S. | : ← 3.0 |
| FUEL DELIVERY CHA | ARACTERISTICS | | Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000S. | : 4.0 : 8.0 |
| hPa Rated speed rpm Del. quantity cm3/1000 strokes | | † † † | | |
| Tolerance cm3/1000 strokes | | ‡ | | |
| Check tolerance cm3/1000s. | : ← 6.0 | ‡ | | |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | | † † † † † † | | |
| | | • | | |

BOSCH INJ. PUMP TEST SPECIFICATIONS Test lines : 1680750008 Outside diameter : 6.0 Note remarks Refer to Service Info for test and x inside diameter : 2.0 adjustment instructions. x length mm : 600 See microcard(s) W400/... Edition : 04.07.94 Test oil : ISO 4113 REMARKS Combination No. : 0402646609 Check and set without ROBO diaphragam Injection pump Pump designation : PE6P120A720RS7188 : -10 EP type number : 0412626924 (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. Governor per values Governer design. : RQV200...950PA725 : -11 Governer no. : 0421814033 BEGINNING OF DELIVERY Test pressure bar : : 1340418 Cust. part No. Tolerance bar : +-Prestroke mm 4.45 Tolerance mm : + 0.05 Customer-spec. information Customer : SCANIA : DSC 11 36 : + 0.10Motor test only Rack travel in mm: 10.50 TEST BENCH REQUIREMENTS : +- 1.50 Tolerance mm : 1-5-3-6-2-Firing order Test oil inlet temp. °C Tolerance °C Phasing : 0-60-120-180-240 Overflow valve : 1417413025 : -300 : + 0.30Tolerance Check Inlet press. bar : tolerance °NW : + - 0.75Tolerance bar Overflow quantity BEGINNING OF DELIVERY DIFFERENCE min. L/h Tolerance 1/h Time to cyl. no. : Test nozzle holde : 1688901104 assembly BASIC SETTING Opening pressure 700 Rated speed rpm Tolerance bar

| Rack travel in mm : 13.85 Tolerance mm : + 0.05 | Tolerance cm3/1000 strokes : +- 1.0 Check tolerance |
|--|---|
| Del. quantity cm3/1000 strokes : 252.0 | cm3/1000s. : +- 4.0 Spreed Tolerance |
| Tolerance | cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 |
| Check tolerance cm3/1000s. : +- 4.0 | RATED SPEED |
| Spreed | |
| Tolerance cm3/1000 strokes : 8.0 | control lever position degree : 62.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. : 12.0 | control lever position degree : 116.0 |
| 2nd speed rpm : 250 | tolerance degree : +- 4.0 |
| Rack travel in mm : 4.70 Tolerance mm : + 0.30 Del. quantity | rack travel mm : 12.80 Rated speed rpm : 995 Tolerance 1/min : +- 5 |
| cm3/1000 strokes : 17.0 + Tolerance cm3/1000 strokes : + 3.0 + Tolerance cm3/1000 str | rack travel mm : 4.00 Rated speed rpm : 1125 |
| Check tolerance cm3/1000s. : + 6.0 cm3/1000s. | Tolerance 1/min : + 15 rack travel mm : 0.50 |
| Tolerance + cm3/1000 strokes : 4.0 + Check tolerance + cm3/1000 strokes : 4.0 + cm3/1000 strokes | Tolerance mm : + 0.50 Rated speed rpm : 1250 |
| cm3/1000s. : 8.0 | LOW IDLE |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | control lever position degree : 64.0 tolerance degree : 4.0 |
| GUIDE SLEEVE POSITION | control lever position degree : 10.0 tolerance degree : +- 4.0 |
| control lever + position degree : -1 + Rated speed rpm : 1150 + | Testing: |
| Rack travel in mm : 9.50 Tolerance mm : + 2.50 | Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 |
| TULL LOAD DELIVERY AT FULL LOAD STOP | Rated speed rpm : 150 |
| Rated speed rpm : 700 | CRT mm min. : > 6.00 |
| Aneroid pressure hPa : - | CONTINUOUS-ACTION CONTROL |
| Del. quantity + cm3/1000 strokes : 252.0 + | Rated speed rpm : 270 |

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| | + Tolerance |
|---|--|
| TORQUE CONTROL | - + cm3/1000 strokes : +- 1.0 + Check tolerance + cm3/1000S. : +- 4.0 |
| Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : +- 0.05 | BREAKAWAY |
| Rated speed rpm : 950 rack travel mm : 13.85 Tolerance mm : +- 0.05 ANEROID/ALTITUDE | Rack travel in mm : 12.80 Rated speed rpm : 995 Tolerance 1/min : +- 5 |
| COMPENSATOR TEST | STARTING FUEL DELIVERY |
| SETTING Rated speed rpm : 500 Pressure hPa : 1500 | Rated speed rpm : 100 rack travel mm : 9.30 Tolerance mm : + 0.20 Del. quantity |
| rack travel mm : 13.85 Tolerance mm : + 0.05 MEASUREMENT | - cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance |
| Pressure hPa : - Rated speed rpm : 500 rack travel mm : 9.30 Tolerance mm : + 0.20 | Check tolerance cm3/1000S. : ← 24.0 |
| Rated speed rpm : 500 | LOW IDLE |
| Pressure hPa : 375 rack travel mm : 12.05 Tolerance mm : + 0.05 | <pre>+ Rated speed rpm : 250 + rack travel mm : 4.70 + Tolerance mm : + 0.30 + Del. quantity + cm3/1000 strokes : 17.0</pre> |
| Pressure hPa : 185 rack travel mm : 11.00 Tolerance mm : + 0.15 | Tolerance : + 3.0 Check tolerance cm3/1000s. : + 6.0 |
| | + Spreed - Tolerance |
| FUEL DELIVERY CHARACTERISTICS | cm3/1000 strokes : 4.0 Check tolerance |
| Aneroid pressure hPa : - | + cm3/1000S. : 8.0 |
| Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 237.0 | † |
| Tolerance cm3/1000 strokes : +- 4.0 | * |
| Check tolerance cm3/1000S. : +- 6.0 | + |
| Aneroid pressure hPa : - | ‡ |
| Rated speed rpm : 500 Del. quantity | |
| cm3/1000 strokes : 115.0 | + |

| | | + |
|---|---------------------------------------|---|
| Note remarks | | † Outside diameter : 8.0 |
| Refer to Service adjustment instru See microcard(s) | Info for test and ctions. W400/ | x inside diameter : 3.0 x length mm : 1000 |
| Edition Test oil | : 19.01.95 : ISO 4113 | REMARKS |
| Combination No. | : 0402646748 | T |
| Injection pump Pump designation | : PE6P120A320LS7834 : -10 | † † - |
| EP type number | | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. |
| | : R9300/1050PA1030-27 | per values |
| Governer no. | : 0421801777 | BEGINNING OF DELIVERY |
| Cust. part No. | : 0260744202 | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| Customer spec. in Customer Motor | | Prestroke mm : 5.25 Tolerance mm : + 0.05 |
| Power KW | : 230.0 | test only : \leftarrow 0.10 |
| FEST BENCH REQUIRE | EMENTS - | Rack travel in mm : 20.50 Tolerance mm : +- 0.50 |
| Test oil inlet cemp. °C Tolerance °C | : 40 : ← 2.0 | Firing order : 6-3-5-2-4 : 1- |
| overflow valve | : 1417413047 | Phasing : 0-60-120-180-240 : -300-360 - Tolerance : +- 0.30 |
| nlet press. bar olerance bar | : 1.5 : +- 0.1 | Check : + 0.75 |
| olerance l/h | : +- 10.0 | BEGINNING OF DELIVERY DIFFERENCE |
| est nozzle holde ssembly | : 1688901105 | Time to cyl. no. : 6 |
| mening pressure | : 208.5 | BASIC SETTING |
| olerance bar ube oil | : + 1.5 | Rated speed rpm : 550 |

| Rack travel in mm : 14.80 Tolerance mm : + 0.05 | guide sleeve travel mm : 6.09 Tolerance mm : +- 0.10 |
|---|--|
| Del. quantity cm3/1000 strokes : 230.0 | Rated speed rpm : 421 guide sleeve travel mm : 4.03 |
| Tolerance cm3/1000 strokes : +- 1.0 | Tolerance mm : + 0.10 |
| Check tolerance cm3/1000s. : +- 4.0 | Rated speed rpm : 550 guide sleeve travel mm : 6.00 |
| Spreed | |
| Tolerance cm3/1000 strokes : 5.0 | Rated speed rpm : 1270 guide sleeve travel mm : 11.50 |
| Check tolerance cm3/1000S. : 9.0 | Tolerance mm : + 0.50 |
| 2nd speed rpm : 300 | Rated speed rpm : 893 guide sleeve travel mm : 6.26 |
| Rack travel in mm : 6.30 Tolerance mm : + 0.30 Del. quantity | Tolerance mm : + 0.10 |
| cm3/1000 strokes : 13.0 Tolerance | GUIDE SLEEVE POSITION |
| cm3/1000 strokes : +- 3.0 Check tolerance | Rated speed rpm : 600 |
| cm3/1000s. : +- 6.0 Spreed Tolerance | Rack travel in mm : 20.00 Tolerance mm : + 0.80 |
| cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| . 10.0 | Rated speed rpm : 550 Aneroid pressure |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | + hPa : 1000 + Del. quantity |
| GUIDE SLEEVE TRAVEL | |
| | + Check tolerance |
| Rated speed rpm : 300 guide sleeve travel mm : 1.82 | + cm3/1000s. : +- 4.0 + Spreed |
| travel mm : 1.82 Tolerance mm : + 0.10 | Tolerance cm3/1000 strokes : 5.0 Check tolerance |
| | |
| Rated speed rpm : 1104 quide sleeve | cm3/1000s. : 9.0 |
| Rated speed rpm : 1104 guide sleeve travel mm : 6.68 Tolerance mm : +- 0.10 | |
| guide sleeve travel mm : 6.68 Tolerance mm : +- 0.10 Rated speed rpm : 1050 guide sleeve | cm3/1000s. : 9.0 RATED SPEED control lever |
| guide sleeve travel mm : 6.68 Tolerance mm : + 0.10 Rated speed rpm : 1050 | cm3/1000s. : 9.0 RATED SPEED |

| Tolerance 1/min | : +- 8 | <u>†</u> | Tolerance mm | : +- 0.15 |
|--|----------------------|---------------|--|---------------------------------------|
| rack travel mm Rated speed rpm Tolerance 1/min | : 4.00 · 1200 | Ŧ | Rated speed rpm | : 400 |
| Tolerance 1/min | : +- 15 | Ī | Pressure hPa rack travel mm Tolerance mm | : 400 : 13 35 |
| rack travel mm Tolerance mm | : 0.75 · + 0.75 | $\frac{1}{1}$ | Tolerance mm | : +- 0.20 |
| Rated speed rpm | : 1300 | Ŧ | Pressure hPa | : 540 : 14.20 |
| LOW IDLE | | | rack travel mm Tolerance mm | : +- 0.20 |
| COW IDEL | | Ţ | | |
| control lever | | <u> </u> | START CUT-OUT | |
| position degree tolerance degree | : 72.0 · + 4.0 | + | Rated speed rpm Check | : > 100 |
| coterance degree | . +- 4.0 | Ī | | : > 80 |
| Testing: | | + | speed 1/min Rated speed rpm | : < 220 |
| Rated speed rpm | • 300 | † | Check speed 1/min | · < 2//0 |
| rack travel mm | · 5.20 | I | speed (/IIIII) | . \ 640 |
| Tolerance mm | : + 0.10 | + | | |
| rack travel mm | . 200 | 1 | FUEL DELIVERY CHA | ARACTERISTICS |
| rack travel mm Rated speed rpm Tolerance 1/min | · 405 | Į | Aneroid pressure | |
| Tolerance 1/min | : ← 20 | + | hPa | : 1000 |
| Rated speed rpm | . 200 | † | Rated speed rpm | : 1050 |
| naceu speeu run | . 200 | I | Del. quantity cm3/1000 strokes | : 228.0 |
| CRT mm min. | : > 6.80 | + | Tolerance | |
| | | + | cm3/1000 strokes | |
| TORQUE CONTROL | | <u> </u> | Check tolerance cm3/1000s. | · +- 60 |
| . STAGE CONTINUE | | Ţ | Spreed | 0.0 |
| Rated speed rpm | : 550 | + | Tolerance | 2.2 |
| rack travel mm Tolerance mm | : 14.80 : ← 0.05 | <u>†</u> | cm3/1000 strokes Check tolerance | : 8.0 |
| rocerance na | עטיט יי | I | cm3/1000s. | : 12.0 |
| Rated speed rpm | : 1050 | + | | · · · · · · · · · · · · · · · · · · · |
| rack travel mm Tolerance mm | | + | Aneroid pressure | |
| ाजस्थातार्थ ।सा | . - 0.10 | 1 | hPa Rated speed rpm | : – : 500 |
| | | | Del. quantity | |
| ANEROID/ALTITUDE | | + | cm3/1000 strokes | : 138.0 |
| COMPENSATOR TEST | | 1 | Tolerance cm3/1000 strokes | : + 1.0 |
| | | Į | Check tolerance | . 1 1.0 |
| SETTING | | † | cm3/1000s. Spreed | : ← 4.0 |
| Rated speed rpm | : 460 | I | Tolerance | |
| Pressure hPa | : 1000 | + | cm3/1000 strokes | : 8.0 |
| rack travel mm | | † | Check tolerance | . 12.0 |
| Tolerance mm | : +- 0.05 | ‡ | cm3/1000s. | : 12.0 |
| MEASUREMENT | | † | DDEAVALIAV | |
| Pressure hPa | : - | 1 | BREAKAWAY | |
| Rated speed rpm | 400 | + | | |
| rack travel mm | : 11.30 | + | Rack travel in mm | : 13.80 |

MO1

Rated speed rpm : 1098 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance cm3/1000s.

: +- 19.0

LOW IDLE

Rated speed rpm 300 rack travel mm 6.30 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 13.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance

cm3/1000s. : +-6.0

Spreed Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. 10.0

| | ı | |
|---|--|--|
| BOSCH INJ. PUMP | TEST SPECIFICATIONS | Test lines : 1680750075 |
| Note remarks | Ŧ | Outside diameter : 8.0 |
| Refer to Service adjustment instru See microcard(s) | Info for test and uctions. W400/ | x inside diameter : 3.0 x Length mm : 1000 |
| Edition Test oil | : 19.01.95 : ISO 4113 | REMARKS |
| Combination No. | : 0402646749 | |
| Injection pump Pump designation EP type number | : PE6P120A320LS7837 : -10 : 0412626855 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Governor Governer design. Governer no. | : RQ300/1050PA993-13 : 0421801779 | BEGINNING OF DELIVERY |
| Cust. part No. | : 0260744002 | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Customer—spec. ir Customer Motor Power KW | : MB-NFZ : 0M441 LA | Prestroke mm : 5.25 Tolerance mm : + 0.05 test only : + 0.10 Rack travel in mm : 20.50 |
| TEST BENCH REQUIR | REMENTS | Tolerance mm : ← 0.50 Firing order : 6-3-5-2-4- : 1- |
| Test oil inlet temp. °C Tolerance °C | : + 40 : + 2.0 | Phasing : 0-60-120-180-240 |
| Overflow valve | : 1417413047 | : -300-360 Tolerance : + 0.30 Check tolerance °NW : + 0.75 |
| Inlet press. bar Tolerance bar | : 1.5 : + 0.1 | |
| Tolerance l/h | : + 10.0 | BEGINNING OF DELIVERY DIFFERENCE |
| Test nozzle holde assembly | : 1688901105 | Time to cyl. no. : 6 |
| Opening pressure bar | : 208.5 | BASIC SETTING |
| Tolerance bar | : +- 1.5 | Rated speed rpm : 550 |
| Lube oil | : 1409918004 | Rack travel in mm : 15.10 |

MO3

| Tolerance mm : +- 0.05 | 1 |
|---|--|
| | Rated speed rpm : 510 |
| Del. quantity cm3/1000 strokes : 252.0 | guide sleeve travel mm : 6.00 |
| Tolerance | + Tolerance mm : + 0.10 |
| cm3/1000 strokes : +- 1.0 | + Rated speed rpm : 1280 + guide steeve |
| Check tolerance : +- 4.0 | travel mm : 11.50 Tolerance mm : + 0.50 |
| | Total difference tian |
| Spreed Tolerance | GUIDE SLEEVE POSITION |
| cm3/1000 strokes : 5.0 | + Rated speed rpm : 600 |
| Check tolerance cm3/1000s. : 9.0 | + Rack travel in mm : 20.00 |
| 2nd speed rpm : 300 | 10lerance mm : +- 0.80 |
| • | |
| Rack travel in mm : 6.20 Tolerance mm : +- 0.30 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Del. quantity cm3/1000 strokes : 19.0 | Rated speed rpm : 550 |
| Tolerance | Aneroid pressure : 1100 |
| cm3/1000 strokes : +- 3.0 Check tolerance | Del. quantity cm3/1000 strokes : 252.0 |
| cm3/1000s. : +- 6.0 Spreed | + Tolerance + cm3/1000 strokes : + 1.0 |
| Tolerance | Check tolerance |
| cm3/1000 strokes : 6.0 Check tolerance | + cm3/1000s. : + 4.0 |
| cm3/1000s. : 10.0 | + Spreed + Tolerance |
| | + cm3/1000 strokes : 5.0 - Check tolerance |
| (B) SETTING OF INJECTION PUMP | + cm3/1000s. : 9.0 |
| WITH GOVERNOR | |
| | + RATED SPEED |
| GUIDE SLEEVE TRAVEL | 1 |
| Rated speed rpm : 300 | + control lever |
| guide sleeve | position degree : 100.0 |
| travel mm : 1.85 Tolerance mm : + 0.10 | tolerance degree : +- 4.0 |
| Rated speed rpm : 1104 | + rack travel mm : 14.10 + Rated speed rpm : 1098 |
| guide sleeve | + Tolerance 1/min : +- 8 |
| travel mm : 6.34 | + |
| Tolerance mm : +- 0.10 | rack travel mm : 4.00 Rated speed rpm : 1200 |
| Rated speed rpm : 1050 guide sleeve | Tolerance 1/min : +- 15 |
| travel mm : 6.00 | rack travel mm : 0.75 |
| Tolerance mm : + 0.10 | + Tolerance mm : + 0.75 + Rated speed rpm : 1300 |
| Rated speed rpm : 413 | T Nateu speed (pill . 1500 |
| guide sleeve travel mm : 4.55 | + LOW IDLE |
| Tolerance mm : + 0.10 | + |

MO4

| | 1. | | |
|--|-------------|-------------------------------------|---------------|
| control lever position degree : 7 tolerance degree : +- | 73.0 4.0 | START CUT-OUT | |
| Testing: | ‡ | Rated speed rpm Check | |
| Dated aread war . 70 | + | speed 1/min | : > 80 |
| Rated speed rpm : 30 rack travel mm : 5 | isn I | Rated speed rpm Check | : < 220 |
| rack travel mm : 5 Tolerance mm : + 0 | | speed 1/min | : < 240 |
| rack travel mm · 2 | · no | | |
| rack travel mm : 2 Rated speed rpm : 40 Tolerance 1/min : +- | 20 | FUEL DELIVERY CHA | RACTERISTICS |
| Rated speed rpm : 20 | n İ | Aneroid pressure hPa | : 1100 |
| nated speed (piii . 20 | Ī | Rated speed rpm | · 1050 |
| CRT mm min. :> 8 | .10 | Del. quantity | |
| | + | cm3/1000 strokes | : 240.0 |
| TOROUT CONTROL | | Tolerance | |
| TORQUE CONTROL | 1 | cm3/1000 strokes Check tolerance | |
| Rated speed rpm : 55 | o I | cm3/1000s. | |
| rack travel mm : 15 | .10 | Spreed | |
| Tolerance mm : \leftarrow 0 | .05 | Tolerance | _ |
| 0.5.5.5 | + | cm3/1000 strokes | |
| Rated speed rpm : 705 | 10 † | Check tolerance cm3/1000s. | : 12.0 |
| Rated speed rpm : 105 rack travel mm : 15 Tolerance mm : + 0 | 10 I | CIII37 (0003. | . 12.0 |
| , | 1 | Aneroid pressure | |
| | | hPa | : |
| ANEROID/ALTITUDE | † | Rated speed rpm | : 500 |
| COMPENSATOR TEST | 1 | Del. quantity cm3/1000 strokes | • 135.0 |
| | Ţ | Tolerance | . 133.0 |
| SETTING | + | cm3/1000 strokes | : + 1.0 |
| | _ + | Check tolerance | |
| Rated speed rpm : 400 Pressure hPa : 1100 | | cm3/1000s. | : |
| Pressure hPa : 1100 rack travel mm : 15 | 1n I | Spreed Tolerance | |
| Tolerance mm : +- 0 | .05 | cm3/1000 strokes | : 8.0 |
| | + | Check tolerance | |
| MEASUREMENT | 1 | cm3/1000s. | : 12.0 |
| Pressure hPa : - | - 1 | | |
| Rated speed rpm : 400 | | BREAKAWAY | |
| rack travel mm : 9 | | | |
| Tolerance mm : ← 0. | .20 † | Rack travel in mm | . 1/ 10 |
| Rated speed rpm : 400 | n I | Rated speed rpm | : 1098 |
| • | + | Tolerance 1/min | : +- 8 |
| Pressure hPa : 150 | | | |
| rack travel mm : 10. | | | |
| Tolerance mm : + 0. | .cu İ | STARTING FUEL DELI | TVERY |
| Pressure hPa : 550 | o Į | DIFFICITIO FOLL DEL. | & Ψ Luf \ I |
| rack travel mm : 13. | .85 | Rated speed rpm | : 100 |
| Tolerance mm : +- 0. | .20 + | Del. quantity | |
| | † | cm3/1000 strokes | : 265.0 |

Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm 300 6.20 rack travel mm Tolerance mm : **←** 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000S. 10.0

| BOSCH INJ. PUMP | TEST SPECIFICATIONS | Outside diameter : 8.0 |
|--|--|--|
| Note remarks | | x inside diameter: 3.0 x length mm : 1000 |
| Refer to Service adjustment instru See microcard(s) | Info for test and uctions. W400/ | <u> </u> |
| Edition Test oil | : 23.01.95 : ISO 4113 | + REMARKS |
| Combination No. | : 0402646750 | Ī |
| Injection pump Pump designation EP type number | : PE6P12DA32OLS7836 : -10 : 0412626854 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Governor Governer design. Governer no. | : RQ300/1050PA1031-21 : 0421801772 | BEGINNING OF DELIVERY Test pressure bar : 31.0 |
| Cust. part No. | : 0260743202 | Tolerance bar : +- 1.0 Prestroke mm : 5.55 Tolerance mm : +- 0.05 |
| Customer—spec. ir Customer Motor Power KW | : MB-NFZ : OM401 LA | test only : + 0.10 Rack travel in mm : 20.50 Tolerance mm : + 0.50 |
| TEST BENCH REQUIR | REMENTS | Firing order : 6-3-5-2-4- : 1- |
| Test oil inlet temp. °C Tolerance °C Overflow valve | : 40 : +- 2.0 : 1417413047 | Phasing : 0-60-120-180-240 : -300-360 : +- 0.30 : Check |
| Inlet press. bar Tolerance bar | : 1.5 · +- 0.1 | tolerance °NW : + 0.75 BEGINNING OF DELIVERY DIFFERENCE |
| Tolerance t/h | | |
| Test nozzle holde assembly | : 1688901105 | Time to cyl. no. : 6 |
| Opening pressure bar Tolerance bar | : 208.5 : +- 1.5 | BASIC SETTING Rated speed rpm : 1050 |
| Test lines | : 1680750075 | Rack travel in mm : 13.00 Tolerance mm : + 0.05 |

| , | |
|--|---|
| Del. quantity = 190.0 | Tolerance cm3/1000 strokes : 5.0 Check tolerance |
| Tolerance | cm3/1000s. : 9.0 |
| cm3/1000 strokes : +- 1.0 | RATED SPEED |
| Check tolerance cm3/1000S. : +- 4.0 | control lever |
| Spreed Tolerance cm3/1000 strokes : 5.0 | position degree : 96.0 tolerance degree : +- 4.0 rack travel mm : 12.00 |
| Check tolerance cm3/1000S. : 9.0 | Rated speed rpm : 1098 Tolerance 1/min : +- 8 |
| 2nd speed rpm : 300 | rack travel mm : 4.00 Rated speed rpm : 1190 |
| Rack travel in mm: 5.80 Tolerance mm: + 0.30 | Tolerance 1/min : +- 15 |
| Del. quantity cm3/1000 strokes : 19.0 Tolerance | rack travel mm : 0.75 Tolerance mm : +- 0.75 Rated speed rpm : 1300 |
| cm3/1000 strokes : + 3.0 + Check tolerance | Rated Speed rpm : 1500 |
| cm3/1000s. : +- 6.0 +- Spreed | LOW IDLE |
| Tolerance + cm3/1000 strokes : 6.0 + Check tolerance + cm3/1000 strokes : 6.0 + cm3/1000 strokes | control lever position degree : 69.0 |
| cm3/1000s. : 10.0 | tolerance degree : +- 4.0 |
| (B) SETTING OF INJECTION PUMP | Testing: |
| WITH GOVERNOR | Rated speed rpm : 300 rack travel mm : 3.50 Tolerance mm : + 0.10 |
| GUIDE SLEEVE POSITION | rack travel mm : 2.00 Rated speed rpm : 350 |
| Rated speed rpm : 600 | Tolerance 1/min : + 20 |
| Rack travel in mm : 20.00 + Tolerance mm : + 0.80 + | Rated speed rpm : 200 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | CRT mm min. : > 5.10 |
| Rated speed rpm : 1050 | TORQUE CONTROL |
| Aneroid pressure hPa : 800 | Rated speed rpm : 1050 rack travel mm : 13.00 |
| Del. quantity cm3/1000 strokes : 190.0 | Tolerance mm : + 0.05 |
| Tolerance + 1.0 + 1.0 | Rated speed rpm : 550 rack travel mm : 13.00 |
| Check tolerance cm3/1000s. : +- 4.0 +- Spreed | Tolerance mm : ← 0.10 |
| + | |

| | | + Rated speed rpm : 500 |
|---|-------------------------------|---|
| ANEROID/ALTITUDE COMPENSATOR TEST | | + Del. quantity + cm3/1000 strokes : 127.0 + Tolerance |
| | | - cm3/1000 strokes : +- 1.0 - Check tolerance |
| SETTING | | - cm3/1000s. : +- 4.0 - Spreed |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 800 : 13.00 | Tolerance : 8.0 check tolerance cm3/1000s. : 12.0 |
| MEASUREMENT | | DDCAKALIAY |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : 10.55 | Rack travel in mm: 12.00 Rated speed rpm: 1098 |
| Rated speed rpm | : 400 | Tolerance 1/min : +- 8 |
| Pressure hPa rack travel mm Tolerance mm | : 200 : 11.40 : +- 0.20 | STARTING FUEL DELIVERY |
| Pressure hPa rack travel mm Tolerance mm | : 12.25 | Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : +- 15.0 |
| START CUT-OUT | | + Check tolerance + cm3/1000s. : +- 19.0 |
| Rated speed rpm Check | : > 100 | † ‡ |
| speed 1/min Rated speed rpm Check | | LOW IDLE |
| speed 1/min | : < 240 | Rated speed rpm : 300 rack travel mm : 5.80 |
| FUEL DELIVERY CHA | ARACTERISTICS | Tolerance mm : + 0.30 Del. quantity - cm3/1000 strokes : 19.0 |
| Aneroid pressure hPa Rated speed rpm Del. quantity | : 800 : 550 | Tolerance cm3/1000 strokes : +- 3.0 Check tolerance |
| cm3/1000 strokes Tolerance | : 189.0 | + cm3/1000S. : + 6.0 + Spreed + Tolerance |
| cm3/1000 strokes Check tolerance | : | + cm3/1000 strokes : 6.0 |
| cm3/1000s. Spreed | : ← 6.0 | Check tolerance cm3/1000s. : 10.0 |
| Tolerance cm3/1000 strokes | : 8.0 | ‡ |
| Check tolerance cm3/1000S. | : 12.0 | <u> </u> |
| Aneroid pressure hPa | : - | |

| BOSCH INJ. PUMP TEST SPECIFICATIONS | Test lines : 1680750075 |
|--|--|
| Note remarks + | Outside diameter : 8.0 |
| Refer to Service Info for test and adjustment instructions. See microcard(s) W400/ | x inside diameter : 3.0 x length mm : 1000 |
| Edition : 23.01.95 Test oil : ISO 4113 | REMARKS |
| Combination No. : 0402646751 | |
| Injection pump Pump designation : PE6P120A320LS7834 : -10 | |
| EP type number : 0412626853 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. |
| Governor Governer design. : RQ300/1050PA1031-20 | per values |
| Governer no. : 0421801774 | BEGINNING OF DELIVERY |
| Cust. part No. : 0260743402 | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Customer—spec. information Customer : MB-NFZ Motor : OM401 LA Power KW : 213.0 | Prestroke mm : 5.55 Tolerance mm : + 0.05 test only : + 0.10 |
| TEST BENCH REQUIREMENTS | Rack travel in mm : 20.50 Tolerance mm : +- 0.50 |
| Test oil inlet temp. °C : 40 Tolerance °C : + 2.0 | Firing order : 6-3-5-2-4- :1 |
| Overflow valve : 1417413047 | Phasing : 0-60-120-180-240 : -300 Tolerance : + 0.30 |
| Inlet press. bar : 1.5 Tolerance bar : + 0.1 | Check tolerance "NW : +- 0.75 |
| Tolerance l/h : + 10.0 | BEGINNING OF DELIVERY DIFFERENCE |
| Test nozzle holde assembly : 1688901105 | Time to cyl. no. : 6 |
| Opening pressure : 208.5 Tolerance bar : + 1.5 | BASIC SETTING |
| Lube oil : 1409918004 | Rated speed rpm : 1050 |

| Rack travel in mr Tolerance mm | n: 14.20 : + 0.05 | <pre>+ guide sleeve + travel mm : 6.13 + Tolerance mm : +- 0.10</pre> |
|---|----------------------|---|
| Del. quantity cm3/1000 strokes | : 202.0 | Rated speed rpm : 430 guide sleeve |
| Tolerance cm3/1000 strokes | : + 1.0 | travel mm : 4.39 Tolerance mm : + 0.10 |
| Check tolerance | | Rated speed rpm : 540 guide sleeve |
| cm3/1000s. Spreed | : +- 4.0 | † travel mm : 6.00 † Tolerance mm : + 0.10 |
| Tolerance cm3/1000 strokes | : 5.0 | Rated speed rpm : 1270 guide sleeve travel mm : 11.50 |
| Check tolerance cm3/1000s. | : 9.0 | + Tolerance mm : +- 0.50 |
| 2nd speed rpm | : 300 | + Rated speed rpm : 829 + guide sleeve + travel mm : 6.38 |
| Rack travel in mm | n: 7.00 : +- 0.30 | Tolerance mm : +- 0.10 |
| Del. quantity cm3/1000 strokes Tolerance | : 19.0 | GUIDE SLEEVE POSITION |
| cm3/1000 strokes Check tolerance | : ← 3.0 | Rated speed rpm : 600 |
| cm3/1000s. Spreed Tolerance | : | + Rack travel in mm : 20.00 + Tolerance mm : + 0.80 |
| cm3/1000 strokes Check tolerance cm3/1000s. | : 6.0 : 10.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| (D) CETTING OF IN | NECTION DUMP | Rated speed rpm : 1050 Aneroid pressure |
| (B) SETTING OF IN WITH GOVERNOR | JECTION PORP | + hPa : 800 + Del. quantity + cm3/1000 strokes : 202.0 |
| GUIDE SLEEVE TRAV | EL | Tolerance cm3/1000 strokes : +- 1.0 Check tolerance |
| Rated speed rpm guide sleeve | : 300 | + cm3/1000S. : + 4.0 + Spreed |
| travel mm Tolerance mm | : 1.93 : ← 0.10 | Tolerance cm3/1000 strokes : 5.0 Check tolerance |
| Rated speed rpm guide sleeve | : 1104 | cm3/1000s. : 9.0 |
| travel mm Tolerance mm | : 6.83 : + 0.10 | RATED SPEED |
| Rated speed rpm guide sleeve | : 1050 | control lever |
| travel mm Tolerance mm | : 6.50 : + 0.10 | position degree : 99.0 tolerance degree : + 4.0 |
| Rated speed rpm | : 732 | rack travel mm : 13.20 Rated speed rpm : 1098 |

| Tolerance 1/min | : +- 8 | † Tole | erance mm : | +- 0.15 |
|---|---------------------|-------------------|---------------------------------|------------------|
| rack travel mm Rated speed rpm | | Rate | ed speed rpm : | 400 |
| Tolerance 1/min | : +- 15 | Pres | ssure hPa : | 200 |
| rack travel mm | | + Tole | travel mm : | 11.65 +- 0.20 |
| Tolerance mm Rated speed rpm | | Pres | sure hPa : | 350 |
| | | | travel mm : | 13.10 +- 0.20 |
| LOW IDLE | | ‡ | | |
| control lever | | + STAR | RT CUT-OUT | |
| position degree tolerance degree | | + Rate + Chec | | > 100 |
| Testing: | | | | > 80 < 220 |
| _ | . 700 | + Chec | :k | |
| Rated speed rpm rack travel mm Tolerance mm | : 300 | + spee | d 1/min : | < 240 |
| | | † FUEL | DELIVERY CHARAC | TERISTICS |
| rack travel mm Rated speed rpm | | ‡ Aner | oid pressure | |
| Tolerance 1/min | : + 20 | hPa Rate | d speed rpm : | 800 550 |
| Rated speed rpm | : 200 | + Del. | quantity 1000 strokes : | |
| CRT mm min. | : > 6.10 | + Tole | rance | |
| | | | 1000 strokes :- k tolerance | |
| TORQUE CONTROL | | + cm3/- + Spre | 1000S. : · e d | ← 6.0 |
| Rated speed rpm rack travel mm | : 1050 : 14.20 | + Tole | rance 1000 strokes : | 8.0 |
| Tolerance mm | | + Check | k tolerance | 12.0 |
| Rated speed rpm | : 550 | + | | 12.0 |
| rack travel mm Tolerance mm | : 14.20 : + 0.10 | + hPa | oid pressure | |
| | | ———— + Del. | d speed rpm : quantity | |
| ANEROID/ALTITUDE COMPENSATOR TEST | | ∔ Tolei | 1000 strokes : rance | |
| | | | 1000 strokes : - k tolerance | ← 1.0 |
| SETTING | | | 1000s. : - | ⊢ 4.0 |
| Rated speed rpm | : 400 : 800 | + Toler | rance | 9 0 |
| Pressure hPa rack travel mm | : 14.20 | + Check | 1000 strokes : k tolerance | |
| Tolerance mm | : + 0.05 | + cm3/1 | 1000s. : | 12.0 |
| MEASUREMENT | | + BREAK | KAWAY | |
| Pressure hPa Rated speed rpm | : - : 400 | <u> </u> | | |
| rack travel mm | | + Rack | travel in mm : | 13.20 |

Rated speed rpm : 1098 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : **←** 15.0

Check tolerance

cm3/1000S. : +- 19.0

LOW IDLE

Rated speed rpm 300 7.00 rack travel mm : +- 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance cm3/1000s.

10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Test Lines : 1680750075 Outside diameter : Note remarks 8.0 Refer to Service Info for test and x inside diameter : 3.0 x Length mm : 1000 adjustment instructions. See microcard(s) W400/... : 23.01.95 Edition : ISO 4113 REMARKS Test oil Combination No. : 0402646752 Injection pump Pump designation : PE6P120A320LS7836 : -10 EP type number : 0412626854 (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. Governor per values _____ Governer design. : RQ300/1050PA1030-26 Governer no. : 0421801775 BEGINNING OF DELIVERY Cust. part No. : 0260742602 Test pressure bar : Tolerance bar : + 1.0Customer-spec. information Prestroke mm 5.55 : MB-NFZ Customer Tolerance mm : 0M401 LA Motor Power KW : 180.0 : +- 0.10 test only Rack travel in mm: 20.50 : +- 0.50 TEST BENCH REQUIREMENTS Tolerance mm : 6-3-5-2-4-Firing order Test oil inlet temp. °C Tolerance °C 2.0 Phasing : 0-60-120-180-240 Overflow valve : 1417413047 : -300-360 : + - 0.30Tolerance Check Inlet press. bar : : +- 0.75 tolerance °NW Tolerance bar Tolerance l/h : +- 10.0 BEGINNING OF DELIVERY DIFFERENCE Test nozzle holde : 1688901105 Time to cyl. no. : 6 assembly Opening pressure 208.5 BASIC SETTING bar Tolerance bar Rated speed rpm 1050 : 1409918004 Lube oil

| 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A | guide sleeve |
|--|---|
| Rack travel in mm : 12.40 - Tolerance mm : +- 0.05 | travel mm : 4.05 Tolerance mm : +- 0.10 |
| Toterance min . Toterance min | Tolerance mm : +- 0.10 |
| Del. quantity | Rated speed rpm : 550 |
| cm3/1000 strokes : 173.0 | guide sleeve |
| | travel mm : 6.00 |
| Tolerance | Tolerance mm : +- 0.10 |
| cm3/1000 strokes : +- 1.0 | - Rated speed rpm : 1280 |
| Check tolerance | guide sleeve |
| cm3/1000s. : +- 4.0 | travel mm : 11.50 |
| | Tolerance mm : +- 0.50 |
| Spreed - | - |
| Tolerance - 5.0 - 5.0 | - GUIDE SLEEVE POSITION |
| CIIIS/ 1000 3110KES . | GOIDE SLEEVE POSITION |
| Check tolerance | - Rated speed rpm : 600 |
| cm3/1000s. : 9.0 | • |
| | Rack travel in mm : 20.00 |
| 2nd speed rpm : 300 - | - Tolerance mm : +- 0.80 |
| Rack travel in mm: 5.80 | |
| Tolerance mm : + 0.30 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Del. quantity | - |
| cm3/1000 strokes : 19.0 | - Rated speed rpm : 1050 |
| Tolerance | - Aneroid pressure |
| cm3/1000 strokes : +- 3.0 Check tolerance | - hPa : 700 - Del. quantity |
| cm3/1000s. : +- 6.0 | - cm3/1000 strokes : 173.0 |
| Spreed | - Tolerance |
| Tolerance | - cm3/1000 strokes : +- 1.0 |
| cm3/1000 strokes : 6.0 | - Check tolerance |
| Check tolerance | - cm3/1000s. : +- 4.0 |
| cm3/1000s. : 10.0 | - Spreed - Tolerance |
| | - cm3/1000 strokes : 5.0 |
| (B) SETTING OF INJECTION PUMP | - Check tolerance |
| WITH GOVERNOR | - cm3/1000S. : 9.0 |
| + | • |
| GUIDE SLEEVE TRAVEL | - RATED SPEED |
| GOIDE SEELVE PRAVEL | - RATED SPEED |
| Rated speed rpm : 300 | - |
| guide sleeve | - control lever |
| travel mm : 1.61 | - position degree : 95.0 |
| Tolerance mm : + 0.10 | - tolerance degree : +- 4.0 |
| Rated speed rpm : 1103 | - - rack travel mm : 11.40 |
| guide sleeve | - Rated speed rpm : 1098 |
| travel mm : 6.37 | - Tolerance 1/min : +- 8 |
| Tolerance mm : \leftarrow 0.10 | |
| Pated speed page + 1050 | - rack travel mm : 4.00 |
| Rated speed rpm : 1050 + guide sleeve + | - Rated speed rpm : 1180 - Tolerance 1/min : +- 15 |
| travel mm : 6.00 | - TOCCI WING TAIRET - TO TO |
| Tolerance mm : + 0.10 | rack travel mm : 0.75 |
| | Tolerance mm : + 0.75 |
| Rated speed rpm : 431 | Rated speed rpm : 1300 |
| † | • |
| | |

| | | + | rack travel mm | : 12.00 |
|---|---|----------|---|----------------|
| W IDLE | | + | Tolerance mm | : ← 0.20 |
| rėmal lavam | | ‡ | START CUT-OUT | |
| itrol lever sition degree erance degree | : 72.0 : + 4.0 | Ī | Rated speed rpm Check | : > 100 |
| _ | • | + | speed 1/min | : > 80 |
| ing: | | # | Rated speed rpm Check | : < 220 |
| speed rpm travel mm | : 300 : 5.80 : ← 0.10 | + | speed 1/min | : < 240 |
| | | <u> </u> | FUEL DELIVERY CHA | ARACTERISTICS |
| travel mm d speed rpm | : 415 | + | Aneroid pressure | |
| ance 1/min | : ← 20 | + | hPa Rated speed rpm | : 700 |
| speed rpm | : 200 | 1 | Del quantity | |
| | | + | cm3/1000 strokes | : 169.0 |
| mm min. | : > 7.40 | 1 | Tolerance cm3/1000 strokes | : +- 3.0 |
| | · | | Check tolerance | |
| E CONTROL | | <u>†</u> | cm3/1000S. Spreed | : +- 6.0 |
| speed rpm | : 1050 | Ī | Tolerance | |
| ravel mm | : 12.40 | + | cm3/1000 strokes | |
| nce mm | : +- 0.05 | ‡ | Check tolerance cm3/1000S. | |
| speed rpm | : 550 | + | | |
| travel mm | : 550 : 12.40 : ← 0.10 | + | Aneroid pressure hPa | • |
| 411C HR! | 0.10 | Į | Rated speed rpm | 500 |
| IN /AL TITUME | | + | Del. quantity | |
| ID/ALTITUDE NSATOR TEST | | ‡ | cm3/1000 strokes Tolerance | : 135.0 |
| .27.7.317.7601 | | + | cm3/1000 strokes | : ← 1.0 |
| .NG | | † | Check tolerance cm3/1000S. | : +- 4.0 |
| | | Į | Spreed | . +- 4.0 |
| d speed rom Sure hPa | : 400 | + | Tolerance | . 0.0 |
| ure nPa travel mm | : /UU : 12,40 | ‡ | cm3/1000 strokes Check tolerance | |
| ince mm | : +- '0.05 | + | cm3/1000S. | : 12.0 |
| REMENT | | ‡ | | |
| sure hPa | | <u>†</u> | BREAKAWAY | |
| speed rpm | : 400 | Į | | |
| travel mm ance mm | : 11.05 | + | Rack travel in mm | |
| ance mm | : ← U.15 | ‡ | Rated speed rpm Tolerance 1/min | |
| speed rpm | : 400 | + | , occi di loc i i ili ili | |
| sure hPa | : 200 | Į | *************************************** | |
| travel mm | | + | STARTING FUEL DEL | IVERY |
| nce mm | : +- 0.20 | İ | Rated speed rpm | : 100 |
| re hPa | : 300 | Ī | nated speed i pill | . 100 |
| | | • | | |

Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 300 5.80 rack travel mm Tolerance mm : ← 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000S. 6.0 Spreed Tolerance cm3/1000 strokes 6.0 Check tolerance cm3/1000S. 10.0

| BUSCH INJ. PUMP T | EST SPECIFICATIONS | + Lube oil : 1409918004 |
|---|--|--|
| Note remarks | | Test Lines : 1680750075 |
| Refer to Service adjustment instru See microcard(s) | Info for test and ctions. W400/ | Outside diameter : 8.0 |
| Edition Test oil | : 23.01.95 : ISO 4113 | x inside diameter : 3.0 x Length mm : 1000 |
| Combination No. | : 0402646753 | + REMARKS |
| Injection pump Pump designation EP type number | : PE6P120A320LS7836 : −10 : 0412626854 | |
| Sovernor | : RQV3001050PA1065 : -3 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| | 00/07/0000 | BEGINNING OF DELIVERY |
| Cust. part No. | : U26U7428U2 | Test pressure bar : 31.0 Tolerance bar : + 1.0 |
| Customer-spec. in Customer Motor Power KW | : MB-NFZ : OM401 LA | Prestroke mm : 5.55 Tolerance mm : + 0.05 test only : + 0.10 |
| EST BENCH REQUIRE | EMENTS | Rack travel in mm : 20.50 Tolerance mm : + 0.50 |
| Test oil inlet Temp. °C Tolerance °C | : 40 : +- 2.0 | Firing order : 6-3-5-2- |
| Overflow valve | : 1417413025 | Phasing : 0-60-120-180-24 : -300 |
| nlet press. bar olerance bar | : 1.5 : +- 0.1 | Tolerance : + 0.30 Check tolerance °NW : + 0.75 |
| verflow quantity in. l/h olerance l/h | : 110 : +- 10.0 | BEGINNING OF DELIVERY DIFFERENCE |
| est nozzle holde ssembly | : 1688901105 | Time to cyl. no. : 6 |
| pening pressure ar plerance bar | : 208.5 : +- 1.5 | BASIC SETTING Rated speed rpm : 1050 |

| 4 | - guide sleeve |
|--|---|
| | travel mm : 2.49 |
| Rack travel in mm : 12.40 Tolerance mm : +- 0.05 | - Tolerance mm : +- 0.25 |
| Del. quantity | - Rated speed rpm : 750 - guide sleeve |
| cm3/1000 strokes : 173.0 | - travel mm : 4.87 - Tolerance mm : + 0.25 |
| cm3/1000 strokes : +- 1.0 | - - Rated speed rpm : 1310 - guide sleeve |
| Check tolerance cm3/1000s. : +- 4.0 | travel mm : 13.50 Tolerance mm : + 0.50 |
| Spreed | |
| Tolerance cm3/1000 strokes : 5.0 | GUIDE SLEEVE POSITION |
| Check tolerance | - control lever |
| cm3/1000s. : 9.0 | position degree : - 1 |
| . ,,, | Rated speed rpm : 1220 |
| 2nd speed rpm : 300 | · · · · · · · · · · · · · · · · · · · |
| | Rack travel in mm : 11.40 |
| Rack travel in mm: 5.80 | Tolerance mm : + 1.30 |
| Tolerance mm : + 0.30 | • |
| Del. quantity | |
| cm3/1000 strokes : 19.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Tolerance | • |
| cm3/1000 strokes : +- 3.0 | Rated speed rpm : 1050 |
| Check tolerance | Aneroid pressure |
| $cm3/1000s$. : \leftarrow 6.0 | hPa : 700 |
| Spreed | Del. quantity |
| Tolerance | cm3/1000 strokes : 173.0 |
| cm3/1000 strokes : 6.0 | Tolerance |
| Check tolerance | cm3/1000 strokes : +- 1.0 |
| cm3/1000s. : 10.0 + | Check tolerance |
| † | cm3/1000s. : +- 4.0 |
| (D) CETTING OF INJECTION DIRECT | Spreed |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | Tolerance cm3/1000 strokes : 5.0 |
| WITH GOVERNOR | Check tolerance |
| | cm3/1000S. : 9.0 |
| GUIDE SLEEVE TRAVEL | . , , , , , , , , , , , , , , , , , , , |
| The same of the same take to the same of t | |
| Rated speed rpm : 300 | RATED SPEED |
| guide sleeve | |
| travel mm : 1.13 + | |
| Tolerance mm : + 0.20 + | control lever |
| - | position degree : 101.0 |
| Rated speed rpm : 1108 | tolerance degree : +- 4.0 |
| guide sleeve | |
| travel mm : 9.81 + | rack travel mm : 11.40 |
| Tolerance mm : + 0.15 | Rated speed rpm : 1095 |
| Pated apped ppm : 270 | Tolerance 1/min : +- 5 |
| Rated speed rpm : 370 | mark traval mm . / 00 |
| guide sleeve + travel mm : 2.00 + | rack travel mm : 4.00 Rated speed rpm : 1170 |
| Tolerance mm : + 0.25 | Rated speed rpm : 1170 Tolerance 1/min : +- 15 |
| | TOLET AINCE TAINET . THE TO |
| Rated speed rpm : 420 | rack travel mm : 0.75 |
| · · · · · · · · · · · · · · · · · · · | |

| lerance mm ted speed rpm | : +- 0.75 : 1300 | Tolerance mm | | |
|---|---------------------|---|-------------------------------|--|
| | | rack travel mm | 12.00 | |
| LE | | Pressure hPa rack travel mm Tolerance mm | : 300 : 12.00 : + 0.20 | |
| ol lever | 10 .0 | START CUT-OUT | | |
| ion degree ance degree | | Rated speed rpm Check | : > 100 | |
| ng: | | speed 1/min Rated speed rpm | : > 80 | |
| d speed rpm | : 300 | + Check | | |
| travel mm ance mm | : 5.80 : +- 0.10 | speed 1/min | : < 240 | |
| speed rpm | : 200 | FUEL DELIVERY CHA | FUEL DELIVERY CHARACTERISTICS | |
| mm min. | : > 8.70 | Aneroid pressure | • 700 | |
| · · · · · · · · · · · · · · · · · · · | ···· | hPa Rated speed rpm | · 550 | |
| INUOUS-ACTION | CONTROL | Del. quantity cm3/1000 strokes | | |
| d speed rpm | : 400 | + Tolerance | | |
| UT CONTTROL | | cm3/1000 strokes Check tolerance cm3/1000s. | | |
| CONTROL | • 1050 | + cm3/10005. + Spreed + Tolerance | : ← 6.0 | |
| speed rpm ravel mm | : 12.40 : + 0.05 | cm3/1000 strokes Check tolerance | | |
| | | cm3/1000s. | | |
| travel mm | : 12.40 | + Aneroid pressure | | |
| Rated speed rpm rack travel mm Tolerance mm | : ← 0.10 | ∔ hPa | : - | |
| | | Rated speed rpm | : 500 | |
| OID/ALTITUDE ENSATOR TEST | | Del. quantity cm3/1000 strokes Tolerance | : 135.0 | |
| COLUMN TON TEST | | cm3/1000 strokes Check tolerance | : +- 1.0 | |
| ING | | cm3/1000s. | : +- 4.0 | |
| ed speed rpm ssure hPa | : 700 | Tolerance cm3/1000 strokes | : 8.0 | |
| travel mm rance mm | : 12.40 | Check tolerance cm3/1000s. | | |
| IREMENT | | | | |
| sure hPa | • - | + BREAKAWAY | | |
| d speed rpm | 400 | I | | |
| travel mm | : 11.05 | Rack travel in mm | | |
| rance mm | : ← 0.15 | Rated speed rpm Tolerance 1/min | : 1095 | |
| d speed rpm | : 400 | Total and Thirt | | |
| ure hPa | : 200 | Ţ | | |
| ravel mm | : 11.45 | STARTING FUEL DEL | | |

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : \leftarrow 19.0

LOW IDLE

Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : $\leftarrow 0.30$

Del. quantity

cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance cm3/1000s. : +- 6.0

Spreed

Tolerance cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.01.95 Test oil : ISO 4113

Combination No. : 0402646755

Injection pump

Pump designation : PE6P12OA32OLS7836-2

EP type number : 0412626944

Governor

Governer design. : RQV300...1050PA1033

: -20

Governer no. : 0421814140

Cust. part No. : 0260742702

Customer—spec. information Customer : MB-NFZ Motor : OM401 LA

Power KW : 180.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1417413647

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Tolerance l/h: + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.55
Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 6-3-5-2-4-

: 1-

Phasing : 0-60-120-180-240

: -300-360Tolerance : +0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.40

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| Tolerance mm : +- 0.05 | + Rated speed rpm : 820 |
|--|--|
| Del. quantity cm3/1000 strokes : 173.0 | travel mm : 6.13 |
| Tolerance cm3/1000 strokes : +- 1.0 | Tolerance mm : +- 0.25 Rated speed rpm : 1183 |
| Check tolerance | guide sleeve travel mm : 10.00 |
| cm3/1000S. : ← 4.0 | Tolerance mm : +- 0.25 |
| Spreed Tolerance cm3/1000 strokes : 5.0 | Rated speed rpm : 1280 guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50 |
| Check tolerance cm3/1000s. : 9.0 | |
| 2nd speed rpm : 300 | GUIDE SLEEVE POSITION |
| Rack travel in mm: 5.80 Tolerance mm: + 0.30 Del. quantity | control lever position degree : - 1 Rated speed rpm : 1150 |
| cm3/1000 strokes : 19.0 Tolerance | + Rack travel in mm : 11.40 |
| cm3/1000 strokes : +- 3.0 Check tolerance | Tolerance mm : +- 1.30 |
| cm3/1000S. : +- 6.0 Spreed Tolerance | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes : 6.0 | Rated speed rpm : 1050 |
| Check tolerance cm3/1000S. : 10.0 | + Aneroid pressure + hPa : 700 |
| (B) SETTING OF INJECTION PUMP | the Del. quantity cm3/1000 strokes : 173.0 to Tolerance |
| WITH GOVERNOR | + cm3/1000 strokes : +- 1.0 + Check tolerance |
| GUIDE SLEEVE TRAVEL | + cm3/1000s. : + 4.0 + Spreed |
| Rated speed rpm : 300 | Tolerance cm3/1000 strokes : 5.0 |
| guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 | Check tolerance cm3/1000S. : 9.0 |
| Rated speed rpm : 1107 guide sleeve | RATED SPEED |
| travel mm : 8.52 Tolerance mm : + 0.15 | control lever |
| Rated speed rpm : 558 guide sleeve | position degree : 119.0 tolerance degree : +- 4.0 |
| travel mm : 4.53 Tolerance mm : + 0.25 | rack travel mm : 11.40 Rated speed rpm : 1095 Tolerance 1/min : + 5 |
| Rated speed rpm : 608 | + |
| guide sleeve travel mm : 5.03 | rack travel mm : 4.00 Rated speed rpm : 1170 |
| Tolerance mm : +- 0.25 | + Tolerance 1/min : +- 15 |

M23

| rack travel mm Tolerance mm Rated speed rpm | : 0.75 : +- 0.75 : 1300 | Pressure hPa : 200 rack travel mm : 11.45 Tolerance mm : + 0.20 Pressure hPa : 300 |
|--|-------------------------------|---|
| LOW IDLE | | Pressure hPa : 300 rack travel mm : 12.00 Tolerance mm : +- 0.20 |
| control lever position degree tolerance degree Testing: | : 66.0 : +- 4.0 | START CUT-OUT Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 220 |
| Rated speed rpm rack travel mm Tolerance mm | : 300 : 5.80 : ← 0.10 | Check speed 1/min : < 240 |
| Rated speed rpm | : 200 | FUEL DELIVERY CHARACTERISTICS |
| CRT mm min. | : > 7.60 | Aneroid pressure hPa : 700 Rated speed rpm : 550 |
| CONTINUOUS-ACTION | CONTROL | Del. quantity cm3/1000 strokes : 169.0 |
| Rated speed rpm | : 375 | + Tolerance + cm3/1000 strokes : +- 3.0 |
| TORQUE CONTROL | | - Check tolerance - cm3/1000s. : +- 6.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 12.40 : +- 0.05 | Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 12.40 : +- 0.10 | Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity |
| ANEROID/ALTITUDE COMPENSATOR TEST | | cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : +- 1.0 |
| SETTING | | - Check tolerance - cm3/1000s. : + 4.0 - Spreed |
| Rated speed rpm Pressure hPa | : 700 | Tolerance cm3/1000 strokes : 8.0 |
| rack travel mm Tolerance mm | | Check tolerance cm3/1000s. : 12.0 |
| MEASUREMENT | | BREAKAWAY |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : 11.05 : + 0.15 | Rack travel in mm : 11.40 Rated speed rpm : 1095 Tolerance 1/min : +- 5 |
| Rated speed rpm | : 400 | Ţ |

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 300 rack travel mm 5.80 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0

Spreed

Tolerance cm3/1000 strokes 6.0

Check tolerance cm3/1000s.

10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Test lines : 1680750075 Note remarks Outside diameter : 8.0 Refer to Service Info for test and x inside diameter : 3.0 adjustment instructions. x length mm : 1000 See microcard(s) W400/... Edition : 23.01.95 Test oil : ISO 4113 REMARKS Combination No. : 0402646757 Injection pump Pump designation : PE6P120A320LS7836 : -16 EP type number : 0412626854 (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ Governor Governer design. : RQ300/1050PA1030-25 Governer no. : 0421801771 BEGINNING OF BELIVERY Cust. part No. : 0260743002 Test pressure bar : Tolerance bar : +- 1.0 Customer-spec. information Prestroke mm 5.55 Customer : MB-NFZ Tolerance mm : 0M401 LA Motor Power KW : 200.0 : +- 0.10 test only Rack travel in mm: 20.50 TEST BENCH REQUIREMENTS Tolerance mm : \leftarrow 0.50 Firing order : 6-3-5-2-4-Test oil inlet : 1temp. °C 40 Tolerance °C 2.0 Phasing : 0-60-120-180-240 Overflow valve : 1417413047 : -300-360 : + - 0.30Tolerance Check Inlet press. bar : 1.5 tolerance °NW : + 0.75Tolerance bar : **←** 0.1 Tolerance l/h: +- 10.0 BEGINNING OF DELIVERY DIFFERENCE Test nozzle holde : 1688901105 assembly Time to cyl. no. : 6 Opening pressure BASIC SETTING Tolerance bar Rated speed rpm : 1050 Lube oil : 1409918004

| + | Check tolerance |
|---|---|
| Rack travel in mm: 13.00 Tolerance mm: + 0.05 | cm3/1000s. : +- 4.0 Spreed Tolerance |
| Del. quantity cm3/1000 strokes : 190.0 | cm3/1000 strokes : 5.0 Check tolerance |
| Tolerance cm3/1000 strokes : + 1.0 | cm3/1000s. : 9.0 |
| Check tolerance cm3/1000s. : + 4.0 | RATED SPEED |
| Spreed | control lever position degree : 95.0 |
| Tolerance cm3/1000 strokes : 5.0 | tolerance degree : +- 4.0 rack travel mm : 12.00 |
| Check tolerance cm3/1000s. : 9.0 | Rated speed rpm : 1098 Tolerance 1/min : +- 8 |
| 2nd speed rpm : 300 | rack travel mm : 4.00 Rated speed rpm : 1185 |
| Rack travel in mm: 5.80 Tolerance mm: + 0.30 Del. quantity | Tolerance 1/min : + 15 rack travel mm : 0.75 |
| cm3/1000 strokes : 19.0 + Tolerance + | Tolerance mm : + 0.75 Rated speed rpm : 1300 |
| cm3/1000 strokes : + 3.0 | LOW IDLE |
| Spreed Tolerance + | |
| cm3/1000 strokes : 6.0 + Check tolerance cm3/1000s. : 10.0 + Check tolerance cm3/1000s. | control lever position degree : 72.0 tolerance degree : +- 4.0 |
| (B) SETTING OF INJECTION PUMP | Testing: |
| WITH GOVERNOR + | Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : + 0.10 |
| GUIDE SLEEVE POSITION | rack travel mm : 2.00 Rated speed rpm : 415 |
| Rated speed rpm : 600 | Tolerance 1/min : + 20 |
| Rack travel in mm : 20.00 Tolerance mm : + 0.80 | Rated speed rpm : 200 CRT mm min. :> 7.60 |
| FULL LOAD DELIVERY AT FULL LOAD STOP | CRT mm min. : > 7.60 |
| Rated speed rpm : 1050 | TORQUE CONTROL |
| Aneroid pressure hPa : 800 Del. quantity | Rated speed rpm : 1050 rack travel mm : 13.00 Tolerance mm : + 0.05 |
| cm3/1000 strokes : 190.0 + Tolerance cm3/1000 strokes : + 1.0 + 1.0 | Rated speed rpm : 550 |
| LIID/ LUCU SCIOKES: T 1.0 | rack travel mm : 13.00 Tolerance mm : +- 0.10 |

| | | + | Rated speed rpm : 500 |
|---|-------------------------------------|---|---|
| ANEROID/ALTITUDE | | | Del. quantity cm3/1000 strokes : 127.0 |
| COMPENSATOR TEST | | <u>†</u> | Tolerance cm3/1000 strokes : +- 1.0 |
| | | Ŧ | Check tolerance |
| SETTING | | <u> </u> | cm3/1000S. : + 4.0 Spreed |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 800 | +++++++++++++++++++++++++++++++++++++++ | Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 |
| MEASUREMENT | | ‡ | DDCAVANAV |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : - : 400 : 10.55 : + 0.15 | † † † | Rack travel in mm : 12.00 Rated speed rpm : 1098 Tolerance 1/min : + 8 |
| Rated speed rpm | : 400 | Ţ | Toterance Minim : +- o |
| Pressure hPa rack travel mm Tolerance mm | : 200 : 11.40 : ← 0.20 | Į Į | STARTING FUEL DELIVERY |
| Pressure hPa rack travel mm Tolerance mm | : 12.25 | † † † | Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : +- 15.0 |
| START CUT-OUT | | ‡ | Check tolerance cm3/1000S. : +- 19.0 |
| Rated speed rpm Check | | † † | |
| speed 1/min Rated speed rpm Check | | <u> </u> | LOW IDLE |
| speed 1/min | : < 240 | | Rated speed rpm : 300 rack travel mm : 5.80 |
| FUEL DELIVERY CHA | RACTERISTICS | T . | Tolerance mm : +- 0.30 Del. quantity |
| Aneroid pressure | | ‡ | cm3/1000 strokes : 19.0 Tolerance |
| hPa Rated speed rpm | : 800 : 550 | <u>†</u> | cm3/1000 strokes : +- 3.0 Check tolerance |
| Del. quantity cm3/1000 strokes | | Ŧ | cm3/1000S. : +- 6.0 Spreed |
| Tolerance cm3/1000 strokes | : +- 3.0 | ‡ | Tolerance cm3/1000 strokes : 6.0 |
| Check tolerance cm3/1000s. Spreed | : +- 6.0 | <u>†</u> | Check tolerance cm3/1000S. : 10.0 |
| Tolerance cm3/1000 strokes | : 8.0 | + | |
| Check tolerance cm3/1000s. | : 12.0 | ‡ | |
| Aneroid pressure hPa | : - | ‡ | |

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Test lines : 1680750075 BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Outside diameter : 8.0 x inside diameter : Refer to Service Info for test and 3.0 x Length mm : 1000 adjustment instructions. See microcard(s) W400/... Edition : 23.01.95 Test oil : ISO 4113 REMARKS Combination No. : 0402646758 Injection pump Pump designation : PE6P120A320LS7834 : -10 EP type number : 0412626853 (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. Governor per values ____ Governer design. : RQ300/1050PA1030-24 : 0421801770 Governer no. BEGINNING OF DELIVERY Cust. part No. : 0260743302 Test pressure bar : Tolerance bar : +-Customer—spec. information Prestroke mm Customer : MB-NFZ Tolerance mm : 0M401 LA Motor Power KW : 213.0 test only : + 0.10Rack travel in mm : 20.50 TEST BENCH REQUIREMENTS Tolerance mm : +- 0.50 : 6-3-5-2-4-Firing order Test oil inlet temp. °C Tolerance °C : 0-60-120-180-240 Phasing Overflow valve : 1417413047 : -300 Tolerance : +- 0.30 Check Inlet press. bar tolerance °NW : +- 0.75 Tolerance bar Tolerance L/h : +- 10.0 BEGINNING OF DELIVERY DIFFERENCE Test nozzle holde assembly : 1688901105 Time to cyl. no. : Opening pressure BASIC SETTING Tolerance bar Rated speed rpm 1050 Lube oil : 1409918004

NO1

| Rack travel in mm Tolerance mm | | travel mm : 6.09 Tolerance mm : + 0.10 |
|--|--------------------|---|
| Del. quantity cm3/1000 strokes | : 202.0 | Rated speed rpm : 410 guide sleeve travel mm : 4.39 |
| Tolerance cm3/1000 strokes | : + 1.0 | Tolerance mm : + 0.10 |
| Check tolerance cm3/1000s. | : + 4.0 | + Rated speed rpm : 510 + guide sleeve + travel mm : 6.00 |
| Spreed | | Tolerance mm : + 0.10 |
| Tolerance cm3/1000 strokes | : 5.0 | Rated speed rpm : 1270 guide sleeve travel mm : 11.50 |
| Check tolerance cm3/1000s. | : 9.0 | Tolerance mm : +- 0.50 |
| 2nd speed rpm | : 300 | Rated speed rpm : 889 guide sleeve travel mm : 6.26 |
| Rack travel in mm Tolerance mm Del. quantity | | Tolerance mm : +- 0.10 |
| cm3/1000 strokes Tolerance | : 19.0 | GUIDE SLEEVE POSITION |
| cm3/1000 strokes Check tolerance | : +- 3.0 | Rated speed rpm : 600 |
| cm3/1000s. Spreed Tolerance | : ← 6.0 | Rack travel in mm: 20.00 Tolerance mm: + 0.80 |
| cm3/1000 strokes Check tolerance | : 6.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000s. | : 10.0 | Rated speed rpm : 1050 |
| (B) SETTING OF IN WITH GOVERNOR | NECTION PUMP | Aneroid pressure hPa : 800 Del. quantity |
| | | + cm3/1000 strokes : 202.0 + Tolerance |
| GUIDE SLEEVE TRAV | | + cm3/1000 strokes : +- 1.0 + Check tolerance |
| Rated speed rpm guide sleeve travel mm | : 300 : 1.78 | - cm3/1000S. : +- 4.0 - Spreed - Tolerance |
| Tolerance mm | : + 0.10 | cm3/1000 strokes : 5.0 Check tolerance |
| Rated speed rpm guide sleeve | | - cm3/1000s. : 9.0 |
| travel mm Tolerance mm | : 6.69 : ← 0.10 | RATED SPEED |
| Rated speed rpm guide sleeve | : 1050 | control lever |
| travel mm Tolerance mm | : 6.35 : + 0.10 | position degree : 100.0 tolerance degree : +- 4.0 |
| Rated speed rpm | : 818 | rack travel mm : 13.20 Rated speed rpm : 1098 |

| Tolerance 1/min | : +- 8 | † Tolerance mm | : ← 0.15 |
|--|---------------------|--|------------------|
| rack travel mm | : 4.00 | Rated speed rpm | : 400 |
| Rated speed rpm Tolerance 1/min | : +- 15 | Pressure hPa rack travel mm Tolerance mm | : 200 : 11 65 |
| rack travel mm Tolerance mm | : 0.75 | Tolerance mm | : +- 0.20 |
| Rated speed rpm | : 1300 | Pressure hPa rack travel mm | : 350 |
| LOW IDLE | | Tolerance mm | : +- 0.20 |
| | | START CUT-OUT | |
| control lever position degree | | Rated speed rpm | : > 100 |
| tolerance degree | : +- 4.0 | + Check - speed 1/min | :> 80 |
| Testing: | | speed 1/min Rated speed rpm Check | : < 220 |
| Rated speed rpm rack travel mm | : 300 : 5.70 | speed 1/min | : < 240 |
| rack travel mm Tolerance mm | | FUEL DELIVERY CH | ARACTERISTICS |
| rack travel mm | 2.00 | + | |
| rack travel mm Rated speed rpm Tolerance 1/min | : +- 20 | + Aneroid pressure + hPa + Rated speed rpm | : 800 |
| Rated speed rpm | | Rated speed rpm Del. quantity cm3/1000 strokes | : 550 |
| CRT mm min. | : > 7.90 | + Tolerance | |
| | | - cm3/1000 strokes - Check tolerance | |
| TORQUE CONTROL | | - cm3/1000s. - Spreed | : +- 6.0 |
| Rated speed rpm rack travel mm | : 1050 : 14.20 | Tolerance cm3/1000 strokes | . • 0 |
| Tolerance mm | | + Check tolerance | |
| Rated speed rpm | : 550 | cm3/1000s. | : 12.0 |
| rack travel mm Tolerance mm | : 14.20 : + 0.10 | + Aneroid pressure + hPa | |
| TOCCT GITCO HEIT | 0.10 | + Rated speed rpm | 500 |
| ANEROID/ALTITUDE | | Del. quantity cm3/1000 strokes | : 127.0 |
| COMPENSATOR TEST | | Tolerance cm3/1000 strokes | |
| SETTING | | Check tolerance cm3/1000s. | : +- 4.0 |
| Rated speed rpm | | + Spreed + Tolerance | |
| Pressure hPa rack travel mm | : 800 : 14.20 | cm3/1000 strokes Check tolerance | : 8.0 |
| Tolerance mm | : + 0.05 | cm3/1000s. | : 12.0 |
| MEASUREMENT | | BREAKAWAY | |
| Pressure hPa | : - | DILAMAI | |
| Rated speed rpm rack travel mm | | Rack travel in m | n: 13.20 |

Rated speed rpm : 1098 Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : **←** 15.0

Check tolerance cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 300 rack travel mm 7.00 Tolerance mm : +- 0.30 Del. quantity cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : +-

3.0 Check tolerance cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. 10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 23.01.95 : ISO 4113 Test oil Combination No. : 0402646759 Injection pump Pump designation : PE6P120A320LS7836

: -10 : 0412626854 EP type number

Governor Governer design. : RQV300...1050PA1033 : -19

Governer no. : 0421814137

Cust. part No. : 0260743102

Customer-spec. information Customer : MB-NFZ Motor : 0M401 LA Power KW : 200.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 2.0 Tolerance °C

Overflow valve : 1417413047

Inlet press. bar 0.1 Tolerance bar

Tolerance l/h: +- 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar

Lube oil : 1409918004 Test lines : 1680750075

Outside diameter : 8.0

3.0 x inside diameter : x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm Tolerance mm

test only : + 0.10

Rack travel in mm: 20.50 Tolerance mm : +- 0.50

: 6-3-5-2-4-Firing order

: 1-

Phasing : 0-60-120-180-240

: -300-360 : + - 0.30Tolerance

Check

tolerance °NW : ← 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm 1050

NO5

| Rack travel in mm : 13.00 + Tolerance mm : + 0.05 | Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 |
|---|--|
| Del. quantity cm3/1000 strokes : 190.0 | Spreed Tolerance cm3/1000 strokes : 5.0 |
| Tolerance cm3/1000 strokes : + 1.0 | Check tolerance cm3/1000s. : 9.0 |
| Check tolerance cm3/1000s. : + 4.0 | RATED SPEED |
| Spreed Tolerance cm3/1000 strokes : 5.0 | control lever position degree : 120.0 tolerance degree : +- 4.0 |
| Check tolerance cm3/1000s. : 9.0 | rack travel mm : 12.00 Rated speed rpm : 1095 |
| 2nd speed rpm : 300 + Rack travel in mm : 5.80 + Tolerance mm : + 0.30 + Dol graphity | Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1175 Tolerance 1/min : + 15 |
| Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +- 3.0 Check_tolerance | rack travel mm : 0.75 Tolerance mm : +- 0.75 Rated speed rpm : 1300 |
| cm3/1000s. : + 6.0 + Spreed + Tolerance cm3/1000 strokes : 6.0 + 6.0 | LOW IDLE |
| Check tolerance cm3/1000s. : 10.0 | control lever position degree : 66.0 tolerance degree : +- 4.0 |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR | Testing: |
| GUIDE SLEEVE POSITION | Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : + 0.10 |
| control lever | Rated speed rpm : 200 |
| position degree : -1 Rated speed rpm : 1155 | CRT mm min. : > 7.60 |
| Rack travel in mm : 12.00 + Tolerance mm : + 1.30 + | CONTINUOUS—ACTION CONTROL |
| FULL LOAD DELIVERY AT FULL LOAD STOP | Rated speed rpm : 350 |
| Rated speed rpm : 1050 Aneroid pressure | TORQUE CONTROL Rated speed rpm : 1050 |
| hPa : 800 Del. quantity cm3/1000 strokes : 190.0 | rack travel mm : 13.00 Tolerance mm : +- 0.05 |

| Rated speed rpm rack travel mm Tolerance mm | : 13.00 | Aneroid pressure hPa : - Rated speed rpm : 500 |
|--|--|--|
| ANEROID/ALTITUDE COMPENSATOR TEST | | - + Del. quantity + cm3/1000 strokes : 127.0 + Tolerance + cm3/1000 strokes : +- 1.0 |
| SETTING | | check tolerance cm3/1000s. : +- 4.0 Spreed |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 400 : 800 : 13.00 : +- 0.05 | Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 |
| MEASUREMENT | | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm | : 10.55 : + 0.15 : 400 | Rack travel in mm : 12.00 Rated speed rpm : 1095 Tolerance 1/min : +- 5 |
| Pressure hPa rack travel mm Tolerance mm | : 200 : 11.40 : +- 0.20 | STARTING FUEL DELIVERY |
| Pressure hPa rack travel mm Tolerance mm | : 350 : 12.25 : + 0.20 | Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : + 15.0 |
| START CUT-OUT | 400 | - |
| Rated speed rpm Check speed 1/min Rated speed rpm | : > 80 | LOW IDLE |
| Check | | + |
| speed 1/min | : < 240 | Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : +- 0.30 |
| FUEL DELIVERY CHA | RACTERISTICS | + Del. quantity + cm3/1000 strokes : 19.0 |
| Aneroid pressure hPa Rated speed rpm | : 800 : 550 | <pre>+ Tolerance + cm3/1000 strokes : ← 3.0 + Check tolerance</pre> |
| Del. quantity cm3/1000 strokes | | + cm3/1000s. : +- 6.0 + Spreed |
| Tolerance cm3/1000 strokes | : 3.0 | Tolerance cm3/1000 strokes : 6.0 |
| Check tolerance cm3/1000s. Spreed | : +- 6.0 | + Check tolerance + cm3/1000s. : 10.0 |
| Tolerance cm3/1000 strokes | : 8.0 | ‡ |
| Check tolerance cm3/1000s. | : 12.0 | ‡ |

| - | + Outside diameter : 8.0 |
|--|---|
| BOSCH INJ. PUMP TEST SPECIFICATIONS - | x inside diameter: 3.0 |
| Note remarks | x Length mm : 1000 |
| Refer to Service Info for test and adjustment instructions. See microcard(s) W400/ | REMARKS |
| Edition : 19.01.95 Test oil : ISO 4113 | |
| Combination No. : 0402646764 | CAN TANESTTON DUMP SETTING VALUES |
| Injection pump Pump designation : PE6P120A320LS7837-2 EP type number : 0412626943 | - (A) INJECTION PUMP SETTING VALUES - Set equal delivery quant. - per values |
| Governor - 20700/105004073 47 | BEGINNING OF DELIVERY |
| Governer design. : RQ300/1050PA972-13 - Governer no. : 0421801767 | - Test pressure bar : 31.0 - Tolerance bar : + 1.0 |
| Cust. part No. : 0260742402 | - Prestroke mm : 5.25 - Tolerance mm : + 0.05 |
| Customer-spec. information | test only : +- 0.10 |
| Customer : MB-NFZ Motor : OM441 LA Power KW : 250.0 | - Rack travel in mm : 20.50 - Tolerance mm : +- 0.50 |
| TEST BENCH REQUIREMENTS | Firing order : 6-3-5-2-4- :1- |
| Test oil inlet temp. °C : 40 Tolerance °C : +- 2.0 Overflow valve : 1417413047 | - Phasing : 0-60-120-180-240 - : -300-360 - Tolerance : +- 0.30 - Check - tolerance *NW : +- 0.75 |
| | - BEGINNING OF DELIVERY DIFFERENCE |
| Inlet press. bar : 1.5 Tolerance bar : +- 0.1 | - SEGIMATIAG OF DEFTACK! DIFLEKEIACE |
| Test nozzle holde assembly : 1688901105 | Time to cyl. no. : 6 |
| Opening pressure bar : 208.5 | - BASIC SETTING |
| Tolerance bar : + 1.5 | - Rated speed rpm : 550 |
| Lube oil : 1409918004 | Rack travel in mm : 15.10 Tolerance mm : + 0.05 |
| Test Lines : 1680750075 | |
| • | |

| Del. quantity cm3/1000 strokes : 252.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 4.0 Soreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Rated speed rpm : 11.50 Tolerance rm : + 0.50 Sored Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Rack travel in rm : 6.20 Tolerance rm : + 0.80 Tolerance rm : + 0.80 Rack travel in rm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Rated speed rpm : 550 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 10.0 GD SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 104 Tolerance mm : + 0.10 Rated speed rpm : 1050 GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 Tolerance mm : + 0.10 Rated speed rpm : 1050 GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 Tolerance mm : + 0.10 Rated speed rpm : 1050 GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 Tolerance mm : + 0.10 Rated speed rpm : 1050 GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 Tolerance mm : + 0.75 Tolerance mm : + 0.75 Tolerance mm : + 0.75 Tolerance mm : + 0.75 Tolerance mm : + 0.75 Tolerance mm : + 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1050 Tolerance mm : + 0.75 Tolerance mm : + 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1300 | | | |
|--|--------------------------------|--------------------|--------------------------------------|
| Tolerance cm3/1000 strokes : + 1.0 | Del. quantity cm3/1000 strokes | : 252.0 | + guide sleeve + travel mm : 6.00 |
| cm3/1000 strokes : ← 1.0 Rated speed rpm : 1280 guide steeve travel rmm : 11.50 cm3/1000s: . ← 4.0 Tolerance mm : ← 0.50 Spreed Tolerance cm3/1000 strokes : 5.0 GUIDE SLEEVE POSITION Check tolerance cm3/1000s. : 9.0 Rack travel in mm : 20.00 2nd speed rpm : 300 Rack travel in mm : 40.30 Rack travel in mm : 6.20 FULL LOAD DELIVERY AT FULL LOAD STOP Tolerance mm : ← 0.30 Polet quantity cm3/1000 strokes : 19.0 cm3/1000 strokes : 19.0 Aneroid pressure folerance cm3/1000 strokes : ← 3.0 check tolerance cm3/1000 strokes : ← 6.0 Del. quantity cm3/1000 strokes : 252.0 cm3/1000 strokes : ← 6.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s : 10.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s : 10.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s : 10.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s : 10.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s : 10.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s : 10.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s : 10.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s : 10.0 Tolerance cm3/1000 strokes : ← | | | |
| Check tolerance cm3/1000s | | : ← 1.0 | |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rack travel in mm : 20.00 Tolerance mm : + 0.80 | | : +- 4.0 | + travel mm : 11.50 |
| Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rack travel in mm : 20.00 Tolerance mm : + 0.80 | Spreed | | |
| Check tolerance cm3/1000s. : 9.0 Rack travel in mm : 20.00 Tolerance mm : → 0.80 2nd speed rpm : 300 FULL LOAD DELIVERY AT FULL LOAD STOP Tolerance mm : → 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance mm3/1000 strokes : 4 3.0 Check tolerance cm3/1000s. Rated speed rpm : 550 Aneroid pressure hPa : 1100 Del. quantity cm3/1000 strokes : 252.0 Tolerance cm3/1000 strokes : 4 0.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. Tolerance cm3/1000 strokes : 4 0.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. * 4.0 Spreed Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. * 9.0 Check toleranc | Tolerance | : 5.0 | + |
| Tolerance mm : + 0.80 | | . 0.0 | + |
| Rack travel in mm : 6.20 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 19.0 Check tolerance cm3/1000S. : + 6.0 Check tolerance cm3/1000S trokes : 6.0 Check tolerance cm3/1000S. : + 0.0 Check tolerance cm3/1000S. : 10.0 Check tolerance cm3/1000S. : 10.0 Check tolerance cm3/1000S. : 10.0 Check tolerance cm3/1000S. : 10.0 Check tolerance cm3/1000S. : 10.0 Check tolerance cm3/1000S. : 10.0 Check tolerance cm3/1000S. : 10.0 Check tolerance cm3/1000S. : 10.0 Check tolerance cm3/1000S. : 10.0 Check tolerance cm3/1000S. : 10.0 Check tolerance cm3/1000S. : 5.0 Check tolerance cm3/1000S. : 5.0 Check tolerance cm3/1000S. : 9.0 Check tolerance cm3/1000S. : 9.0 Check tolerance cm3/1000S. : 9.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/1000S. : 4.0 Check tolerance cm3/100OS. : 4.0 Check tolerance cm3/10OS. : 4.0 Check tolerance cm3/10OS. : 4.0 Check tolerance cm3/10OS. : 4.0 Check tolerance cm3/10OS. : | | | |
| Tolerance mm : ← 0.30 Del. quantity Rated speed rpm : 550 m3/1000 strokes : 19.0 Aneroid pressure rolerance hPa : 1100 cm3/1000 strokes : ← 6.0 Del. quantity cm3/1000 strokes : 252.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000 strokes : ← 4.0 Spreed Tolerance cm3/1000s. : ← 4.0 Check tolerance cm3/1000s. : ← 4.0 Check tolerance cm3/1000s. : ← 4.0 Spreed Tolerance cm3/1000s. : ← 4.0 Spreed Tolerance cm3/1000s. : ← 4.0 Check tolerance cm3/1000s. : ← 4.0 Check tolerance cm3/1000s. : ← 4.0 Check tolerance cm3/1000s. : ← 4.0 Check tolerance cm3/1000s. : ← 4.0 Check tolerance cm3/1000s. : ← 4.0 Check tolerance cm3/1000s. : ← 5.0 Check tolerance | · | | |
| Aneroid pressure 100 Check tolerance 100 Che | | | FULL LOAD DELIVERY AT FULL LOAD STOP |
| Aneroid pressure 100 Check tolerance 100 Che | | | Rated speed rpm : 550 |
| Tolerance cm3/1000 strokes : + 3.0 | cm3/1000 strokes | : 19.0 | |
| cm3/1000 strokes : ← 3.0 bel. quantity cm3/1000s. : ← 6.0 Tolerance cm3/1000 strokes : 6.0 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 WITH GOVERNOR RATED SPEED Rated speed rpm : 300 control lever guide sleeve travel mm : 1.94 Tolerance mm : ← 0.10 rack travel mm : 14.10 Rated speed rpm : 1104 Rated speed rpm : 1098 guide sleeve rack travel mm : 4.00 travel mm : ← 0.10 rack travel mm : 4.00 Rated speed rpm : 1050 Tolerance 1/min : ← 15 guide sleeve rack travel mm : 0.75 travel mm : ← 0.10 rack travel mm : 0.75 Rated speed rpm : 441 rack travel mm : 0.75 Tolerance mm : ← 0.10 rack travel mm : 0.75 Rated speed rpm : 441 rack travel mm : 0.75 Tolerance mm : ← 0.10 | | | |
| Check tolerance cm3/1000 strokes : 252.0 cm3/1000s. : + 6.0 cm3/1000 strokes : + 1.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 WITH GOVERNOR RATED SPEED GUIDE SLEEVE TRAVEL RATED SPEED Rated speed rpm : 1.94 tolerance degree : + 4.0 Tolerance mm : + 0.10 rack travel mm : 14.10 Rated speed rpm : 1098 rolerance 1/min : + 8 Tolerance mm : + 0.10 rack travel mm : 4.00 Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 1050 rack travel mm : 0.75 Tolerance mm : + 0.10 rack travel mm : 0.75 Rated speed rpm : 1300 rack travel mm : + 0.75 Rated speed rpm : 1300 rack travel mm : + 0.75 Rated speed rpm : 441 rack travel mm : + 0.75 Rated speed rpm : + 0.10 rack tra | | : ← 3.0 | |
| Tolerance | | | - cm3/1000 strokes : 252.0 |
| Spreed Tolerance Cm3/1000 strokes : + 1.0 Check tolerance Cm3/1000s Check tolerance Cm3/100s Check tolerance Cm3/100s Check tolerance Cm3/100s Check tolerance C | | | |
| Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/10 | | | |
| cm3/1000 strokes : 6.0 cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : 10.0 cm3/1000s. : 5preed Tolerance cm3/1000 strokes : 5.0 check tolerance cm3/1000s. : 9.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR RATED SPEED GUIDE SLEEVE TRAVEL RATED SPEED Rated speed rpm : 300 guide sleeve travel mm : 1.94 Tolerance mm : + 0.10 control lever position degree : 100.0 tolerance degree : + 4.0 Rated speed rpm : 1104 guide sleeve travel mm : 6.34 Tolerance mm : + 0.10 rack travel mm : 14.10 Rated speed rpm : 1098 Tolerance 1/min : + 8 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance mm : + 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1300 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 LOW IDLE | | | |
| Spreed Tolerance cm3/1000s. : 10.0 | | • 60 | - cm3/1000s · +- 4.0 |
| Cm3/1000S. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.94 Tolerance mm : + 0.10 Rated speed rpm : 1104 guide sleeve travel mm : 6.34 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 Tolerance cm3/1000S : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED RATED SPEED control lever position degree : 100.0 tolerance degree : + 4.0 rack travel mm : 14.10 Rated speed rpm : 1098 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance mm : + 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 | | . 0.0 | |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.94 Tolerance mm : 4.00 Rated speed rpm : 1104 guide sleeve travel mm : 6.34 Tolerance mm : 4.010 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : 4.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : 4.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : 4.10 Rated speed rpm : 1200 Rated speed rpm : 1050 Tolerance mm : 4.10 Rated speed rpm : 1200 Rated speed rpm : 1200 Tolerance mm : 4.10 Rated speed rpm : 1200 Rated speed rpm : 1200 Tolerance mm : 4.10 Rated speed rpm : 1200 Rated speed rpm : 1300 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 | | • 10.0 | |
| Check tolerance cm3/1000s. : 9.0 WITH GOVERNOR RATED SPEED RATED SPEED RATED SPEED Control lever position degree : 100.0 tolerance degree : + 4.0 Tolerance mm : + 0.10 Rated speed rpm : 1104 guide sleeve travel mm : 6.34 Tolerance mm : + 0.10 Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 1050 rack travel mm : 0.75 Tolerance mm : + 0.10 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : 4.85 Tolerance mm : 4.85 LOW IDLE | tile/ 16665. | . 10.0 | |
| (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.94 Tolerance mm : + 0.10 Rated speed rpm : 1104 guide sleeve travel mm : 6.34 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 Rated speed rpm : 445 Guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 RATED SPEED Control lever position degree : 100.0 tolerance degree : + 4.0 rack travel mm : 14.10 Rated speed rpm : 1098 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : + 15 Rated speed rpm : 1200 Tolerance mm : + 0.75 Rated speed rpm : 1300 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 | | | |
| GUIDE SLEEVE TRAVEL Rated speed rpm : 300 control lever position degree : 100.0 tolerance mm : + 0.10 Rated speed rpm : 1104 rack travel mm : 14.10 Rated speed rpm : 1104 Rated speed rpm : 1098 guide sleeve travel mm : 6.34 Tolerance 1/min : + 8 Tolerance mm : + 0.10 rack travel mm : 4.00 Rated speed rpm : 1050 Rated speed rpm : 1200 guide sleeve travel mm : + 0.10 Tolerance 1/min : + 15 Tolerance mm : + 0.10 rack travel mm : 0.75 Rated speed rpm : 441 Tolerance mm : + 0.75 Rated speed rpm : 445 Tolerance mm : + 0.10 | | NJECTION PUMP | |
| GUIDE SLEEVE TRAVEL Rated speed rpm : 300 control lever position degree : 100.0 tolerance mm : + 0.10 Rated speed rpm : 1104 rack travel mm : 14.10 Rated speed rpm : 1104 Rated speed rpm : 1098 guide sleeve travel mm : 6.34 Tolerance 1/min : + 8 Tolerance mm : + 0.10 rack travel mm : 4.00 Rated speed rpm : 1050 Rated speed rpm : 1200 guide sleeve travel mm : + 0.10 Tolerance 1/min : + 15 Tolerance mm : + 0.10 rack travel mm : 0.75 Rated speed rpm : 441 Tolerance mm : + 0.75 Rated speed rpm : 445 Tolerance mm : + 0.10 | | | RATED SPEED |
| guide sleeve 1.94 Tolerance mm 1.94 Rated speed rpm 1104 guide sleeve 1098 travel mm 1098 Tolerance mm 1098 Tolerance mm 1098 Tolerance mm 1098 Tolerance 1/min 1098 Tolerance 1/min 1000 Rated speed rpm 1200 Tolerance 1/min 15 Tolerance 1/min 15 Tolerance 1/min 15 Tolerance 1/min 1000 Tolerance mm 1000 Rated speed rpm 1300 Rated speed rpm 1300 Rated speed rpm 1000 Tolerance mm 10 | GUIDE SLEEVE TRAV | VEL - | 1 |
| guide sleeve 1.94 Tolerance mm 1.94 Rated speed rpm 1104 guide sleeve 1098 travel mm 1098 Tolerance mm 1098 Tolerance mm 1098 Tolerance mm 1098 Tolerance 1/min 1098 Tolerance 1/min 1000 Rated speed rpm 1200 Tolerance 1/min 15 Tolerance 1/min 15 Tolerance 1/min 15 Tolerance 1/min 1000 Tolerance mm 1000 Rated speed rpm 1300 Rated speed rpm 1300 Rated speed rpm 1000 Tolerance mm 10 | Rated speed rom | . 300 | control lever |
| travel mm : 1.94 Tolerance mm : + 0.10 Rated speed rpm : 1104 guide sleeve : 6.34 Tolerance mm : + 0.10 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Tolerance 1/min : + 15 guide sleeve : 6.00 travel mm : 0.75 Tolerance mm : + 0.10 Rated speed rpm : 1300 Rated speed rpm : 441 guide sleeve travel mm : 4.85 travel mm : 4.85 Tolerance mm : + 0.10 | | . 300 | |
| Tolerance mm : + 0.10 Rated speed rpm : 1104 | | . 1.94 | |
| Rated speed rpm : 1104 | | | total united degree 4.6 |
| Rated speed rpm : 1104 guide sleeve travel mm : 6.34 Tolerance mm : 4.00 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : 4.00 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : +- 15 Tolerance mm : 0.75 Tolerance mm : +- 0.75 Rated speed rpm : 1300 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : +- 0.10 | | | rack travel mm : 14.10 |
| guide sleeve 6.34 Tolerance mm 6.34 Tolerance mm 4.00 Rated speed rpm 1200 Rated speed rpm 1200 Rated speed rpm 15 guide sleeve 1050 travel mm 0.75 Tolerance mm 1000 Rated speed rpm 1300 Rated speed rpm 1300 Rated speed rpm 1300 LOW IDLE | Rated speed rom | : 1184 | |
| Travel mm : 6.34 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 0.75 Tolerance mm : + 0.10 Rated speed rpm : 1300 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 LOW IDLE | | | |
| Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 0.75 Tolerance mm : + 0.10 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 Tolerance mm : + 0.10 Tolerance mm : + 0.10 Tolerance mm : + 0.10 Tolerance mm : + 0.10 | | • 634 | Tocci and Triming |
| Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : 40.10 Rated speed rpm : 1200 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.10 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 LOW IDLE | | | rack travel mm · 400 |
| Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : 0.75 Tolerance mm : + 0.10 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 Tolerance 1/min : + 15 rack travel mm : 0.75 Rated speed rpm : 1300 LOW IDLE | TO CET GITTE THE | 0.10 | |
| guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 Robert Tolerance mm : + 0.10 Tolerance mm : + 0.10 | Rated speed rom | • 1050 | |
| travel mm : 6.00 rack travel mm : 0.75 Tolerance mm : + 0.10 Tolerance mm : + 0.75 Rated speed rpm : 1300 Rated speed rpm : 1300 LOW IDLE | | . 1050 | Total and thin 15 |
| Tolerance mm : +- 0.10 Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : +- 0.75 Rated speed rpm : 1300 LOW IDLE | | . 600 | rack traval mm · 0.75 |
| Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 Rated speed rpm : 1300 LOW IDLE | | | |
| Rated speed rpm : 441 guide sleeve travel mm : 4.85 Tolerance mm : + 0.10 | TO LET OF ILE IIII | 0.10 | |
| travel mm : 4.85 + LOW IDLE Tolerance mm : + 0.10 + | | : 441 | Tated speed (piii . 1500 |
| Tolerance mm : + 0.10 | | , 05 | 100.50.5 |
| | | | LOW IDLE |
| Rated speed rpm : 570 | iolerance mm | : ← U.1U → | † |
| The second secon | Rated speed rpm | : 570 | † |

| + | |
|--|--|
| control lever position degree : 74.0 tolerance degree : + 4.0 | START CUT-OUT |
| Testing: | Rated speed rpm : > 103 Check |
| Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 | <pre>speed 1/min : > 80 Rated speed rpm : < 220 Check speed 1/min : < 240</pre> |
| rack travel mm : 2.00 + Rated speed rpm : 400 + Tolerance 1/min : + 20 | FUEL DELIVERY CHARACTERISTICS |
| Rated speed rpm : 200 | Aneroid pressure hPa : 1100 |
| CRT mm min. :> 8.50 | Rated speed rpm : 1050 Del. quantity |
| TOROUS CONTROL | cm3/1000 strokes : 240.0 Tolerance |
| TORQUE CONTROL | cm3/1000 strokes : +- 3.0 Check tolerance |
| Rated speed rpm : 550 + rack travel mm : 15.10 + Tolerance mm : +- 0.05 + | cm3/1000S. : +- 6.0 Spreed Tolerance |
| Rated speed rpm : 1050 | cm3/1000 strokes : 8.0 Check tolerance |
| rack travel mm : 15.10 Tolerance mm : +- 0.10 | cm3/1000s. : 12.0 |
| ANEROID/ALTITUDE COMPENSATOR TEST | Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 135.0 |
| SETTING | Tolerance cm3/1000 strokes : +- 1.0 |
| Rated speed rpm : 400 + Pressure hPa : 1100 + | Check tolerance cm3/1000s. : +- 4.0 Spreed |
| rack travel mm : 15.10 + Tolerance mm : + 0.05 | Tolerance cm3/1000 strokes : 8.0 |
| MEASUREMENT | Check tolerance cm3/1000s. : 12.0 |
| Pressure hPa : - Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.20 | BREAKAWAY |
| Rated speed rpm : 400 | Rack travel in mm : 14.10 Rated speed rpm : 1098 |
| Pressure hPa : 150 + rack travel mm : 10.05 + Tolerance mm : + 0.20 | Tolerance 1/min : + 8 |
| Pressure hPa : 550 | STARTING FUEL DELIVERY |
| rack travel mm : 13.85 Tolerance mm : + 0.20 | Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 235.0 |
| + | 2 2222 22. 2.02 |

Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 300 rack travel mm : 6.20 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0

| | | 1 | |
|---------------------------------------|--------------------------|--|----------------|
| BOSCH INJ. PUMP T | TEST SPECIFICATIONS | Lube oil : 1409918004 | |
| Note remarks | | 1,00750075 | |
| Refer to Service | Info for test and | Test Lines : 1680750075 | |
| adjustment instru See microcard(s) | ictions. | Outside diameter : 8.0 | |
| estimin. | 40.04.05 | x inside diameter: 3.0 x length mm : 1000 | |
| Edition Test oil | : 19.07.95 : ISO 4113 | + x length mm : 1000 | |
| Combination No. | : 0402646765 | REMARKS | |
| Injection pump | | T NEW MANAGE | |
| Pump designation | : PE6P120A320LS7837 | + | |
| EP type number | : -10 : 0412626855 | + | |
| Governor | | (A) INJECTION PUMP SETTING VALUES | |
| | : RQV3001050PA797 | + Set equal delivery quant. | |
| Governer no. | : -43 : 0421814134 | per values | |
| Governier no. | : 0421614134 | | |
| | | + BEGINNING OF DELIVERY | |
| Cust. part No. | : 0260742502 | T | |
| | | Test pressure bar : 31.0 Tolerance bar : +- 1.0 | |
| | | + | |
| Customer-spec. in | formation | Brackwalls are | |
| Customer Motor | : MB-NFC | + Prestroke mm : 5.25 + Tolerance mm : + 0.05 | |
| Power KW | : 250.0 | Totel and in 1. 1. 0.05 | |
| | | + test only : +- 0.10 | |
| TEST BENCH REQUIR | EMFNTS | Rack travel in mm: 20.50 | |
| | | + Tolerance mm : + 0.50 | |
| Test oil inlet | | Fining and A 7 5 3 | , |
| temp. °C | : 40 | Firing order : 6-3-5-2- | 4- |
| Tolerance °C | | + | |
| | | + | |
| Overflow valve | • 1417413047 | + Phasing : 0-60-120-180-24 | <u>د</u> 0 |
| TOTAL VICE | • 1711713071 | + : -300-360 | , U |
| | | + Tolerance : +- 0.30 | |
| inlet press. bar Tolerance bar | : 1.5 | + Check | |
| oterance bar | : + U.1 | tolerance °NW : + 0.75 | |
| Overflow quantity | | | |
| nin. l/h Tolerance l/h | : 110 | + BEGINNING OF DELIVERY DIFFERENCE | |
| loterance (/h | : +- 70.0 | ‡ | |
| | | + | |
| Test nozzle holde | 4.00004405 | Time to cyl. no. : 6 | |
| assembly | : 1088901105 | İ | |
| Opening pressure | | BASIC SETTING | |
| oar | : 208.5 | + | |
| Tolerance bar | : +- 1.5 | † Rated speed rpm : 550 | |
| | | | |

| | + | guide sleeve |
|--|---------------------|--|
| Rack travel in mr Tolerance mm | | travel mm : 5.03 Tolerance mm : +- 0.25 |
| Del. quantity cm3/1000 strokes | : 252.0 | Rated speed rpm : 820 guide sleeve travel mm : 6.13 |
| Tolerance cm3/1000 strokes | : + 1.0 | Tolerance mm : +- 0.25 Rated speed rpm : 1183 |
| Check tolerance cm3/1000s. | : + 4.0 | guide sleeve travel mm : 10.00 Tolerance mm : +- 0.25 |
| Spreed Tolerance cm3/1000 strokes | : 5.0 | Rated speed rpm : 1280 guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50 |
| Check tolerance cm3/1000s. | : 9.0 | |
| 2nd speed rpm | : 300 | GUIDE SLEEVE POSITION |
| Rack travel in mm Tolerance mm Del. quantity | : ← 0.30 + | control lever position degree : - 1 Rated speed rpm : 1140 |
| cm3/1000 strokes Tolerance | + | Rack travel in mm : 14.10 |
| cm3/1000 strokes Check tolerance | + | Tolerance mm : + 1.30 |
| cm3/1000s. Spreed Tolerance | : + 6.0 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes Check tolerance | : 6.0 | Rated speed rpm : 550 Aneroid pressure |
| cm3/1000s. | : 10.0 | hPa : 1100 Del. quantity |
| (B) SETTING OF IN | NECTION PUMP | cm3/1000 strokes : 252.0 Tolerance cm3/1000 strokes : +- 1.0 |
| | | Check tolerance cm3/1000S. : +- 4.0 |
| GUIDE SLEEVE TRAV | + | Spreed Tolerance |
| Rated speed rpm guide sleeve travel mm | : 300 | cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 |
| Tolerance mm | | |
| Rated speed rpm guide sleeve | 1 | RATED SPEED |
| travel mm Tolerance mm | : 8.54 : + 0.15 | control lever |
| Rated speed rpm guide sleeve | : 558 | position degree : 122.0 tolerance degree : +- 4.0 |
| travel mm Tolerance mm | : 4.53 : +- 0.25 | rack travel mm : 14.10 Rated speed rpm : 1095 |
| Rated speed rpm | : 608 | Tolerance 1/min : +- 5 |
| | | |

| rack travel mm Rated speed rpm Tolerance 1/min | | Rated speed rpm : 400 |
|---|------------------------------|---|
| rack travel mm Tolerance mm Rated speed rpm | : 0.75 : ← 0.75 | Pressure hPa : 150 rack travel mm : 10.05 Tolerance mm : + 0.20 |
| LOW IDLE | . 7500 | Pressure hPa : 550 rack travel mm : 13.85 Tolerance mm : + 0.20 |
| control lever | 05.0 | START CUT-OUT |
| position degree tolerance degree | : 85.0 : 4.0 | Rated speed rpm : > 100 |
| Testing: | | + speed 1/min : > 80 + Rated speed rpm : < 220 |
| Rated speed rpm rack travel mm Tolerance mm | : 300 : 5.50 : ← 0.10 | Check speed 1/min : < 240 |
| Rated speed rpm | : 200 | FUEL DELIVERY CHARACTERISTICS |
| CRT mm min. | : > 8.60 | Aneroid pressure 1100 |
| CONTINUOUS-ACTION | CONTROL | Rated speed rpm : 1050 Del. quantity cm3/1000 strokes : 240.0 |
| Rated speed rpm | : 350 | + cm3/1000 strokes : 240.0 + Tolerance + cm3/1000 strokes : + 3.0 |
| TORQUE CONTROL | - | Check tolerance + cm3/1000S. : + 6.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 15.10 | Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance |
| Rated speed rpm | : 1050 | cm3/1000s. : 12.0 |
| rack travel mm Tolerance mm | : 15.10 : + 0.10 | Aneroid pressure hPa : - Rated speed rpm : 500 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | + Del. quantity + cm3/1000 strokes : 135.0 + Tolerance |
| | | cm3/1000 strokes : +- 1.0 Check tolerance |
| SETTING | | cm3/1000s. : +- 4.0 Spreed |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 400 : 1100 : 15.10 | Tolerance cm3/1000 strokes : 8.0 Check tolerance |
| | : +- 0.05 | cm3/1000s. : 12.0 |
| MEASUREMENT | | BREAKAWAY |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : 400 : 9.15 : +- 0.20 | Rack travel in mm : 14.10 Rated speed rpm : 1095 |

Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 235.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000S.: +- 24.0

LOW IDLE

Rated speed rpm 300 6.20 rack travel mm : +- 0.30 Tolerance mm Del. quantity

cm3/1000 strokes :

Tolerance cm3/1000 strokes : +-3.0

19.0

Check tolerance

cm3/1000S. 6.0

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. 10.0

| BOSCH TNJ. PUMP 1 | TEST SPECIFICATIONS + | Lube oil : 1409918004 |
|---|---|---|
| Note remarks | ‡ | Test lines : 1680750075 |
| Refer to Service adjustment instru See microcard(s) | Info for test and uctions. | Outside diameter : 8.0 x inside diameter : 3.0 |
| Edition Test oil | 1 | x length mm : 1000 |
| Combination No. | : 0402646766 | REMARKS |
| EP type number Governor | : PE6P120A320LS7837 : -10 : 0412626855 : RQ300/950PA993-11 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Governer no. | | |
| Cust. part No. | : 0260742302 | BEGINNING OF DELIVERY Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| Customer spec. in Customer Motor Power KW | : MB-NFZ : 0M441 LA | Prestroke mm : 5.25 Tolerance mm : + 0.05 test only : + 0.10 |
| TEST BENCH REQUIR | EMENTS | Rack travel in mm : 20.50 Tolerance mm : +- 0.50 |
| Test oil inlet temp. °C Tolerance °C | : 40 : + 2.0 | Firing order : 6-3-5-2-4- : 1- |
| Overflow valve | : 1417413047 | Phasing : 0-60-120-180-240 : -300-360 |
| Inlet press. bar Tolerance bar | : 1.5 : + 0.1 | Tolerance : + 0.30 Check tolerance °NW : + 0.75 |
| Overflow quantity min. l/h Tolerance l/h | : 170 : + 10.0 | BEGINNING OF DELIVERY DIFFERENCE |
| Test nozzle holde assembly | : 1688901105 | Time to cyl. no. : 6 |
| Opening pressure | . 208.5 | BASIC SETTING |
| Tolerance bar | : 208.5 : + 1.5 | Rated speed rpm : 550 |

| | | • • • |
|--|---------------------|--|
| Rack travel in mm Tolerance mm | : 15.10 : + 0.05 | guide sleeve travel mm : 3.46 Tolerance mm : +- 0.10 |
| Del. quantity cm3/1900 strokes | : 252.0 | Rated speed rpm : 580 guide sleeve travel mm : 6.00 |
| Tolerance cm3/1000 strokes | · + 1.0 | Tolerance mm : +- 0.10 |
| Check tolerance cm3/1000s. | : +- 4.0 | Rated speed rpm : 1190 guide sleeve travel mm : 11.50 |
| Spreed Tolerance | <u> </u> | Tolerance mm : +- 0.50 |
| cm3/1000 strokes : | 5.0 | GUIDE SLEEVE POSITION |
| Check tolerance cm3/1000s. | 9.0 | Rated speed rpm : 600 |
| 2nd speed rpm : | : 300 | Rack travel in mm : 20.00 Tolerance mm : +- 0.80 |
| Rack travel in mm : Tolerance mm : Del. quantity | 6.20 + 0.30 | FULL LOAD DELIVERY AT FULL LOAD STOP |
| cm3/1000 strokes : Tolerance | + | Rated speed rpm : 550 Aneroid pressure |
| cm3/1000 strokes : Check tolerance | + 3.0 | hPa : 1100 Del. quantity |
| cm3/1000S. : | + 6.0 | cm3/1000 strokes : 252.0 Tolerance |
| Tolerance cm3/1000 strokes : | 6.0 | cm3/1000 strokes : +- 1.0 Check tolerance |
| Check tolerance cm3/1000s. : | 10.0 | cm3/1000S. : +- 4.0 Spreed |
| (B) SETTING OF INJE | CTION PUMP | Tolerance cm3/1000 strokes : 5.0 Check tolerance |
| WITH GOVERNOR | + | cm3/1000s. : 9.0 |
| GUIDE SLEEVE TRAVEL | | RATED SPEED |
| Rated speed rpm : guide sleeve | 300 | control Lever |
| travel mm : Tolerance mm : | + 0.10 + 0.10 | position degree : 100.0 tolerance degree : +- 4.0 |
| Rated speed rpm : guide sleeve | 1005 | rack travel mm : 14.10 Rated speed rpm : 998 |
| travel mm : Tolerance mm : | 6.34 + 0.10 | Tolerance 1/min : +- 8 |
| Rated speed rpm : guide sleeve | 950 | rack travel mm : 4.00 Rated speed rpm : 1105 Tolerance 1/min : +- 15 |
| travel mm : Tolerance mm : | 6.00 + 0.10 | rack travel mm : 0.75 |
| Rated speed rpm : | 340 | Tolerance mm : + 0.75 Rated speed rpm : 1300 |
| | + | |

| | | + rack travel mm : 13.85 |
|---|------------------------------|--|
| LOW IDLE | | Tolerance mm : +- 0.20 |
| control lever | | START CUT-OUT |
| position degree tolerance degree | | Rated speed rpm : > 100 Check |
| Testing: | | speed 1/min :> 80 Rated speed rpm : < 220 |
| Rated speed rpm rack travel mm Tolerance mm | : 300 : 3.50 : +- 0.10 | + Check + speed 1/min : < 240 |
| rack travel mm | | FUEL DELIVERY CHARACTERISTICS |
| ated speed rpm olerance 1/min | : 340 | Aneroid pressure hPa : 1100 |
| ated speed rpm | : 200 | Rated speed rpm : 950 Del. quantity |
| RT mm min. | : > 6.50 | cm3/1000 strokes : 240.0 Tolerance |
| | | cm3/1000 strokes : + 3.0 Check tolerance |
| ORQUE CONTROL | | cm3/1090s. : +- 6.0 Spreed |
| ited speed rpm ick travel mm olerance mm | : 15.10 | Tolerance cm3/1000 strokes : 8.0 Check tolerance |
| | | cm3/1000S. : 12.0 |
| ted speed rpm ck travel mm lerance mm | : 950 : 15.10 : + 0.10 | Aneroid pressure hPa : - |
| cer di lee min | | Rated speed rpm : 500 Del. quantity |
| ROID/ALTITUDE PENSATOR TEST | | cm3/1000 strokes : 135.0 Tolerance |
| | | + cm3/1000 strokes : + 1.0 + Check tolerance |
| ITING | | + cm3/1000S. : +- 4.0 |
| ted speed rpm essure hPa ck travel mm lerance mm | : 1100 | BREAKAWAY |
| erance mm | : ← 0.05 | Rack travel in mm: 14.10 |
| ASUREMENT | | Rated speed rpm : 998 Tolerance 1/min : +- 8 |
| essure hPa ted speed rpm | 400 | ‡ |
| ck travel mm Lerance mm | : 9.15 : ← 0.20 | STARTING FUEL DELIVERY |
| ted speed rpm | | Rated speed rpm : 100 |
| essure hPa | : 150 | + Del. quantity + cm3/1000 strokes : 235.0 |
| ck travel mm lerance mm | : 10.05 : ← 0.20 | Tolerance cm3/1000 strokes : +- 20.0 |
| essure hPa | : 550 | + Check tolerance + cm3/1000s. : +- 24.0 |
| 40 | | |

LOW IDLE

300 6.20 Rated speed rpm rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes 6.0 Check tolerance 10.0 cm3/1000s.

| Note remarks | Į | Outside diameter : 8.0 |
|---|--|--|
| Refer to Service adjustment instru See microcard(s) | Info for test and lections. | x inside diameter : 3.0 x length mm : 1000 |
| Edition Test oil | : 19.01.95 : ISO 4113 | REMARKS |
| Combination No. | : 0402646767 | |
| EP type number | : PE6P120A320LS7837 : -10 : 0412626855 | (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values |
| Governor Governer design. | : RQV300950PA797 : -42 | BEGINNING OF DELIVERY |
| Governer no. Cust. part No. | ‡ | Test pressure bar : 31.0 Tolerance bar : +- 1.0 |
| | <u> </u> | Prestroke mm : 5.25 Tolerance mm : +- 0.05 |
| Customer-spec. in Customer Motor | | test only : \leftarrow 0.10 |
| Power KW | : 250.0 | Rack travel in mm : 20.50 Tolerance mm : + 0.50 |
| TEST BENCH REQUIR | EMENTS | Firing order : 6-3-5-2-4 |
| Test oil inlet temp. °C Tolerance °C | : + 40 : + 2.0 | Phasing : 0-60-120-180-240 : -300-360 |
| Overflow valve | : 1417413047 | Tolerance : +- 0.30 Check tolerance °NW : +- 0.75 |
| Inlet press, bar Tolerance bar | | BEGINNING OF DELIVERY DIFFERENCE |
| Test nozzle holde assembly | : 1688901105 | Time to cyl. no. : 6 |
| Opening pressure bar Tolerance bar | : 208.5 : + 1.5 | BASIC SETTING |
| | : 1409918004 | Rated speed rpm : 550 |
| Lube oil | | |

BOSCH INJ. PUMP TEST SPECIFICATIONS

Test lines : 1680750075

| Tolerance mm : +- 0.05 | - Rated speed rpm : 780 |
|---|--|
| Del. quantity cm3/1000 strokes : 252.0 | - guide sleeve - travel mm ; 6.31 |
| Tolerance | - Tolerance mm : +- 0.25 - Rated speed rpm : 1092 |
| Check tolerance | - guide sleeve - travel mm : 10.00 |
| cm3/1000s. : +- 4.0 | Tolerance mm : + 0.25 |
| Spreed Tolerance cm3/1000 strokes : 5.0 | - Raï⊵d speed rpm : 1190 - guide sleeve - travel mm : 11.50 - Tolerance mm : +- 0.50 |
| Check tolerance cm3/1000s. : 9.0 | |
| 2nd speed rpm : 300 | - GUIDE SLEEVE POSITION |
| Rack travel in mm: 6.20 | - control lever |
| Tolerance mm : + 0.30 | - position degree : -1 |
| Del. quantity | - Rated speed rpm : 1040 |
| cm3/1000 strokes : 19.0 | <u>.</u> |
| Tolerance | - Rack travel in mm : 14.10 |
| cm3/1000 strokes : + 3.0 Check tolerance | - Tolerance mm : +- 1.30 |
| cm3/1000s. : +- 6.0 | |
| Spreed Talanana | - FULL LOAD DELIVERY AT FULL LOAD STOP |
| Tolerance - cm3/1000 strokes : 6.0 | - - Rated speed rpm : 550 |
| Check tolerance | - Nated Speed Pail . 330 - Aneroid pressure |
| cm3/1000s. : 10.0 | - hPa : 1100 |
| - | - Del. quantity |
| + | - cm3/1000 strokes : 252.0 |
| (B) SETTING OF INJECTION PUMP | - Tolerance |
| WITH GOVERNOR | - cm3/1000 strokes : + 1.0 |
| † | Check tolerance |
| CUTNE CLEENE TRAVEL | $- \text{ cm}^3/1000\text{S}$. : $+- 4.0$ |
| GUIDE SLEEVE TRAVEL | - Spreed - Tolerance |
| Rated speed rpm : 300 | - cm3/1000 strokes : 5.0 |
| guide sleeve | Check tolerance |
| travel mm : 1.29 | - cm3/1000S. : 9.0 |
| Tolerance mm : + 0.20 | • |
| Rated speed rpm : 1009 | RATED SPEED |
| guide sleeve + travel mm : 8.55 | • |
| Tolerance mm : + 0.15 | · control lever |
| To cer di tee min | position degree : 122.0 |
| Rated speed rpm : 567 guide sleeve | tolerance degree : +- 4.0 |
| travel mm : 4.66 | rack travel mm : 14.10 |
| Tolerance mm : + 0.25 | Rated speed rpm : 995 |
| Pated coard com : 417 | Tolerance 1/min : +- 5 |
| Rated speed rpm : 617 | rack travel mm : 4.00 |
| travel mm : 5.23 | Rated speed rpm : 1100 |
| Tolerance mm : + 0.25 | Tolerance 1/min : +- 15 |
| | The second section of the second seco |

| rack travel mm Tolerance mm Rated speed rpm LOW IDLE | : ← 0.70 | + + + + + + + + | Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm | : 10.05 : + 0.20 |
|---|--|--|--|---------------------|
| control lever position degree tolerance degree Testing: | : ← 4.0 | † † † † | START CUT-OUT Rated speed rpm Check speed 1/min Rated speed rpm Check | |
| rack travel mm Tolerance mm | : 5.50 : + 0.10 | <u> </u> | speed 1/min | : < 240 |
| Rated speed rpm | : 200 | + | FUEL DELIVERY CHA | RACTERISTICS |
| CRT mm min. | : > 8.50 | | Aneroid pressure hPa Rated speed rpm | : 1100 : 950 |
| CONTINUOUS-ACTION | CONTROL | + | Del. quantity | |
| Rated speed rpm | : 325 | +++++++++++++++++++++++++++++++++++++++ | cm3/1000 strokes Tolerance cm3/1000 strokes | |
| TORQUE CONTROL | ······································ | | Check tolerance cm3/1000s. Spreed | : +- 6.0 |
| Rated speed rpm rack travel mm Tolerance mm | : 550 : 15.10 : +- 0.05 | + | Tolerance cm3/1000 strokes Check tolerance | |
| Rated speed rpm rack travel mm Tolerance mm | : 950 : 15.10 : + 0.10 | † † | cm3/1000s. Aneroid pressure hPa Rated speed rpm | : - |
| ANEROID/ALTITUDE | | I | Del. quantity cm3/1000 strokes | |
| COMPENSATOR TEST | | + | Tolerance cm3/1000 strokes Check tolerance | : +- 1.0 |
| SETTING | | Ī | cm3/1000s. Spreed | : +- 4.0 |
| Rated speed rpm Pressure hPa rack travel mm | : 400 : 1100 : 15.10 | + | Tolerance cm3/1000 strokes Check tolerance | : 8.0 |
| Tolerance mm | : + 0.05 | Ŧ | cm3/1000s. | : 12.0 |
| MEASUREMENT | | ‡ | BREAKAWAY | |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : 400 : 9.15 : + 0.20 | +++++++++++++++++++++++++++++++++++++++ | Rack travel in mm Rated speed rpm Tolerance 1/min | : 995 |
| Rated speed rpm | : 400 | ‡ | | |

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity cm3/1000 strokes :

235.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : \leftarrow 24.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 6.20
Tolerance mm : + 0.30
Del. quantity
cm3/1000 strokes : 19.0
Tolerance
cm3/1000 strokes : + 3.0

Check tolerance cm3/1000s. : +- 6.0

Spreed Tolerance

cm3/1000 strokes : 6.0

Check tolerance cm3/1000s.

cm3/1000s. : 10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.11.94 Test oil : ISO 4113

Combination No. : 0402646880

Injection pump

Pump designation : PE6P12DA72DRS7126

: -10

EP type number : 0412626929

Governor

Governer design. : RQV200...1050PA725

: -5

Governer no. : 0421813814

Cust. part No. : 1120969

Customer-spec. information Customer : SCANIA Motor : DS 11

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

. 4

Phasing : 0-60-120-180-240 : -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 14.15 Tolerance mm : + 0.05

| Del. quantity cm3/1000 strokes : 235.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Control lever position degree : 4.0 control lever position degree : + 4.0 Rack travel in mm : 4.60 Tolerance degree : + 4.0 Rack travel in mm : 4.60 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : - 4.0 Spreed Tolerance cm3/1000s. : - 4.0 Check tolerance cm3/1000s. : - 4.0 Spreed Tolerance cm3/1000s. : - 4.0 Spreed Tolerance cm3/1000s. : - 4.0 Check tolerance cm3/1000 |))) |
|--|--|
| Tolerance cm3/1000 strokes : + 1.0 |))) |
| Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : - 4.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Control lever position degree : 4.0 Control lever position degree : + 4.0 Rack travel in mm : 4.60 Rack travel in mm : 4.60 Rack travel in mm : 4.60 Rack travel in mm : 4.60 Rack travel mm : 13.10 Rated speed rpm : 1095 Tolerance 1/min : + 5 Check tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0 Check tolerance cm3/1000s. : 6.0 |) |
| Spreed Tolerance cm3/1000 strokes: 6.0 Check tolerance cm3/1000s.: 9.0 Znd speed rpm: 225 Rack travel in mm: 4.60 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 17.0 Tolerance cm3/1000 strokes: 17.0 Tolerance cm3/1000 strokes: + 2.0 Check tolerance cm3/1000 strokes: + 4.0 Spreed Tolerance cm3/1000 strokes: 3.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check |) |
| Tolerance cm3/1000 strokes: 6.0 Check tolerance cm3/1000s.: 9.0 2nd speed rpm: 225 Rack travel in mm: 4.60 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 17.0 Tolerance cm3/1000 strokes: + 2.0 Check tolerance cm3/1000s.: + 4.0 Spreed Tolerance cm3/1000 strokes: 3.0 Check tolerance cm3/1000 strokes: 3.0 Check tolerance cm3/1000 strokes: 3.0 Check tolerance cm3/1000 strokes: 6.0 Tolerance cm3/1000 strokes: 3.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 4.0 Check tolerance check tolerance check tolerance check tolerance check tolerance check toleran |) |
| cm3/1000 strokes : 6.0 6.0 position degree : 62.0 Check tolerance cm3/1000s. : 9.0 control lever position degree : 117.0 2nd speed rpm : 225 tolerance degree : 4.0 Rack travel in mm : 4.60 rack travel mm : 13.10 Tolerance mm : + 0.30 Rated speed rpm : 1095 Del. quantity cm3/1000 strokes : 17.0 rack travel mm : 4.00 Tolerance cm3/1000 strokes : + 2.0 Rated speed rpm : 1215 Check tolerance cm3/1000s. : + 4.0 rack travel mm : 0.50 Spreed rack travel mm : 0.50 Tolerance mm : + 0.50 rack travel mm : 0.50 Rated speed rpm : 1320 rack travel mm : 0.50 Tolerance mm : + 0.50 rack travel mm : 0.50 Tolerance mm : + 0.50 rack travel mm : 1320 LOW IDLE LOW IDLE |) |
| cm3/1000S. : 9.0 control lever position degree : 117.0 2nd speed rpm : 225 tolerance degree : + 4.0 Rack travel in mm : 4.60 rack travel mm : 13.10 Tolerance mm : + 0.30 Rated speed rpm : 1095 Del. quantity Tolerance 1/min : + 5 cm3/1000 strokes : 17.0 rack travel mm : 4.00 Rated speed rpm : 1215 Tolerance 1/min : + 15 Check tolerance cm3/1000s. : + 4.0 Cm3/1000 strokes : 3.0 rack travel mm : 0.50 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Check tolerance cm3/1000s. : 6.0 LOW IDLE | |
| 2nd speed rpm : 225 tolerance degree : 4.60 Rack travel in mm : 4.60 rack travel mm : 13.10 Tolerance mm : + 0.30 Rated speed rpm : 1095 Del. quantity Tolerance 1/min : + 5 cm3/1000 strokes : + 2.0 Rated speed rpm : 4.00 Check tolerance Tolerance 1/min : + 15 cm3/1000s : + 4.0 rack travel mm : 0.50 Spreed rack travel mm : 0.50 Tolerance Tolerance mm : + 0.50 cm3/1000 strokes : 3.0 Rated speed rpm : 1320 Check tolerance Cm3/1000s : 6.0 LOW IDLE | |
| Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0 Check tolerance cm3/1000s. : 6.0 |) |
| Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance Tolerance Tolerance Tolerance Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 0.50 Rated speed rpm : 1215 Tolerance 1/min : + 0.50 Tolerance 1/min : + 15 Toler | , |
| cm3/1000 strokes : 17.0 17.0 Tolerance cm3/1000 strokes : + 2.0 rack travel mm : 4.00 Check tolerance cm3/1000s. : + 4.0 Tolerance 1/min : + 15 Spreed rom : 0.50 rack travel mm : 0.50 Tolerance cm3/1000 strokes : 3.0 Rated speed rpm : 1320 Check tolerance cm3/1000s. : 6.0 LOW IDLE | |
| Tolerance cm3/1000 strokes : + 2.0 | |
| cm3/1000s. : + 4.0 Spreed rack travel mm : 0.50 Tolerance Tolerance mm : + 0.50 cm3/1000 strokes : 3.0 Rated speed rpm : 1320 Check tolerance cm3/1000s. : 6.0 LOW IDLE | 1 |
| cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0 CB) SETTING OF INJECTION PUMP Tack travel mm : 0.50 Rated speed rpm : 1320 LOW IDLE | |
| cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0 CB) SETTING OF INJECTION PUMP Tack travel mm : 0.50 Rated speed rpm : 1320 LOW IDLE | |
| Tolerance cm3/1000 strokes : 3.0 | • |
| cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0 Cm3/1000s. : 6.0 Cm3/1000s. : 6.0 Cm3/1000s. : 6.0 | |
| Check tolerance cm3/1000s. : 6.0 LOW IDLE (B) SETTING OF INJECTION PUMP | |
| (B) SETTING OF INJECTION PUMP | |
| | ************************************** |
| | |
| | |
| position degree : 64.0 | |
| tolerance degree : +- 4.0 | |
| GUIDE SLEEVE POSITION - control lever | |
| + position degree : 10.0 | |
| tolerance degree : +- 4.0 | |
| control lever + Testing: | |
| position degree : -1 + Testing: Rated speed rpm : 1200 + | |
| Rated speed rpm : 225 | |
| Rack travel in mm: 10.50 $+$ rack travel mm: 4.60 | |
| Tolerance mm : $+$ 2.50 $+$ Tolerance mm : $+$ 0.30 | |
| FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 100 | |
| CRT mm min. : > 6.10 | |
| Rated speed rpm : 700 | |
| hPa : 900 + CONTINUOUS-ACTION CONTROL | |
| Del. quantity + Rated speed rpm : 300 | |
| cm3/1000 strokes : 235.0 + Rated speed rpm : 300 + Rated speed rpm : 300 | |
| cm3/1000 strokes : + 1.0 | |
| Check tolerance + TORQUE CONTROL | |
| cm3/1000s. : +- 4.0 | |

| Rated speed rpm | : 700 : 14.15 | <u> </u> |
|---|--------------------------------|--|
| rack travel mm Tolerance mm | : + 0.05 | DREAKAWAY |
| Rated speed rpm rack travel mm Tolerance mm | : 1050 : 14.15 : +- 0.05 | Rack travel in mm : 13.10 Rated speed rpm : 1095 Tolerance 1/min : +- 5 |
| ANEROID/ALTITUDE COMPENSATOR TEST | | STARTING FUEL DELIVERY |
| SETTING | | Rated speed rpm : 100 |
| Rated speed rpm Pressure hPa rack travel mm Tolerance mm | : 500 : 900 : 14.15 | rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 300.0 |
| MEASUREMENT | : +- 0.05 | Tolerance cm3/1000 strokes : +- 20.0 Check tolerance |
| Pressure hPa Rated speed rpm rack travel mm Tolerance mm | : 10.70 | cm3/1000s. : +- 24.0 |
| Rated speed rpm | : 500 | + LOW IDLE |
| Pressure hPa rack travel mm Tolerance mm | : 510 : 13.05 : ← 0.05 | Rated speed rpm : 225 rack travel mm : 4.60 Tolerance mm : + 0.30 Del. quantity |
| Pressure hPa rack travel mm Tolerance mm | : 11.20 | cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed |
| FUEL DELIVERY CHA | RACTERISTICS | Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0 |
| hPa Rated speed rpm Del. quantity cm3/1000 strokes | | 1 (1157 16605) |
| Tolerance cm3/1000 strokes | | 1 |
| Check tolerance cm3/1000s. | | + |
| Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. | : 152.0 | † † † † † † † † † |
| | | |